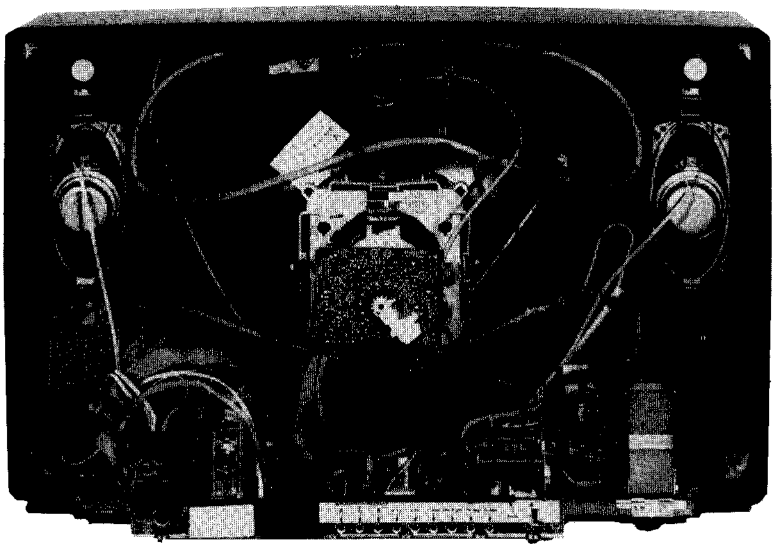
TECHNISCHER KUNDENDIENST

Service-Information



FFS-Chassis F 11

783.520.B 00 69
783.525.B 00 70
783.527.B 00 52
783.528.B 00 71
783.530.B 00 58
783.534.B 00 49
783.539.B 00 77

NORDMENDE

Diese Angaben und Hinweise sind ausschließlich für den Service des Fachhändlers bestimmt · Änderungen vorbehalten · These instructions are for service dealers only · Subject to modification · Questi dati e queste istruzioni sono riservati ai tecnici del servizio assistenza · Con riserva di modifiche

Inhaltsverzeichnis

	Seite
Funktionsbeschreibung	2 - 3
Sockelschaltungen	4
Blockschaltbilder: AN 5260 X, TDA 4610	5
TDA 1950, TBA 120 UB	6
TDA 3506, TEA 2014	7
Einstellarbeiten	8 - 11
Zeilenendstufe mit Kaskade	12
Leiterplatte Bildrohranschluß, Netzteil, Grundplatte	13 - 15
Hauptschaltbild	16 - 20
Chassisvariante für 2 x 12 W-NF-Endstufen	21 - 24
Ton-ZF/Stereo-Modul	25 - 27
PAL-Decoder Modul	28
Ton-ZF Modul	29 - 30
HF-Block	31 - 36
Modulliste	37
Blockschaltbild	38 - 39

Index

	Page
Function description	2 - 3
Socket connections	4
Block diagrams: AN 5260 X, TDA 4610	5
TDA 1950, TBA 120 UB	6
TDA 3506, TEA 2014	7
Initial adjustment	8 - 11
Horizontal output stage with cascade	12
P.C.B. CRT socket, power supply, basic P.C.B.	13 - 15
Mains circuit diagram	16 - 20
Chassis variation with 2 x 12 W AF-Output stages	21 - 24
Sound IF Stereo module	25 - 27
PAL-Decoder module	28
Sound-IF module	29 - 30
RF block	31 - 36
Module list	37
Block diagramm	38 - 39

Indice

	Pagina
Descrizione del funzionamento	2 - 3
Circuiti a zoccolo	4
Schema a blocchi: AN 5260 X, TDA 4610	5
TDA 1950, TBA 120 UB	6
TDA 3506, TEA 2014	7
Operazioni di messa a punti	8 - 11
Stadio finale di riga con cascata	12
Piastra zoccolo cinescopio, piastra di rete, piastra di base	13 - 15
Diagramma principale	16 - 20
Variante di telaio per 2 x 12 W stadi finali BF	21 - 24
Modulo IF tono stereo	25 - 27
Modulo decoder PAL	28
Modulo FI-tono	29 - 30
Unità AF	31 - 36
Lista moduli	37
Circuiti a blocci	38 - 39

Funktionsbeschreibung Netzteil

Anlauffunktion

Nach Betätigung des Netzschalters liefert das Primärnetzteil mit dem Netztrafo UP 41 die erforderlichen Betriebsspannungen für das geregelte Netzteil.

Über RP 21, RP 24 gelangt von der Bedienungselektronik ein L-Pegel auf die Basis des TP 21. Dieser schaltet durch, da das Primärnetzteil über DP 21, DP 24, DP 03 eine positive Spannung an den Emitter liefert.

Die nun durchgeschaltete Kollektorspannung wirkt über RP 27 als vorläufige Anlaufbetriebsspannung an Pin 14 des IL 01, dessen Zeilengenerator ab 5,5 V schwingt. Von Pin 2 wird über RL 19 der Treibertransistor TL 01 mit zeilenfrequenten Impulsen gesteuert. Die erforderliche Kollektorspannung liefert das Primärnetzteil über DP 13, die als Entkopplungsdiode dient.

Durch die Schwellenspannung der drei Dioden DP 21, DP 24, DP 03 ist sichergestellt, daß vom Zeitablauf zuerst die Kollektorspannung des TL 01 und dann erst das Ansteuersignal anliegt.

Über den Treibertrafo UL 01 erhält TL 02 für seine Schaltfunktion den erforderlichen Basisstrom. Die Kollektorspannung des TL 02 wird über die Sicherung FP 02, LP 01, DP 14 und den Zeilentrafo zugeführt.

Die Horizontalablenkung läuft an und erzeugt im Sekundärnetzteil die notwendigen Betriebsspannungen für das Gerät. Diese sind zunächst während der Einschaltphase ohne Funktion des geregelten Netzteils etwas zu gering und unstabilisiert.

Anlauffunktion des geregelten Netzteiles

Über RP 25 und DP 12 lädt sich CP 10 auf. Erreicht das Spannungspotential am Emitter des TP 05 die um den Schwellwert erhöhte Basisspannung, so schaltet dieser durch und lädt über RP 23 den CP 12 auf. Die Zeitkonstante des RC-Gliedes läßt eine sägezahnförmige Spannungsform entstehen.

Function description Power supply unit

Warm-up function

After actuation of the line power switch the primary line section with line transformer UP 41 supplies the operating voltages required for the controlled line section.

An L-level originating at the operating electronics and passing through RP 21 and RP 24 is applied to the base of TP 21. This switches through since the primary line section supplies a positive voltage to the emitter through DP 21, DP 24 and DP 03.

The collector voltage now switched through RP 27 serves as temporary warm-up operation voltage and is applied to pin 14 of IL 01, the line generator of which oscillates upwards of 5,5 V. Driver transistor TL 01 is triggered with horizontal-frequency pulses originating at pin 2 of IL 01 and passing through RL 19. The required collector voltage is supplied by the primary line section through DP 13, which serves as a decoupling diode.

The threshold voltages of the three diodes, DP 21, DP 24 and DP 03, insure that first the collector voltage of TL 01 is present and only then is the triggering signal applied.

TL 02 receives via driver transformer UL 01 the base current required for its switching function. The collector voltage of TL 02 is supplied through fuses FP 02, LP 01 and DP 14 and the line transformer.

The horizontal deflection starts and generates in the secondary line section the operational voltages which the receiver requires. These are initially, during the warm-up phase, too low and non-stabilized until the controlled line section begins to function.

Warm-up function of the controlled line section

CP 10 is charged through RP 25 and DP 12. If the voltage potential at the emitter of TP 05 achieves the base voltage, elevated by threshold value, the transistor switches through and charges CP 12 through RP 23. The time constant of the RC network causes a sawtooth voltage to be generated.

Descrizione di funzione dell'unità alimentatore rete

Funzione di avviamento

Dopo aver azionato l'interruttore rete, la parte rete primaria del trasformatore rete UP 41 fornisce le tensioni di lavoro necessarie per l'alimentatore rete regolato.

Attraverso RP 21, RP 24, dall'elettronica comandi arriva un livello L alle base del TP 21. Questo va in conduzione perché l'alimentatore rete primario fornsice una tensione positiva all'emitter tramite DP 21, DP 24, DP 03.

La tensione collettore, ora in conduzione, agisce attraverso RP 27 come tensione di avviamento temporanea al Pin 14 dello IL 01, il cui generatore di riga oscilla dopo 5,5 V. Dal Pin 2, attraverso RL 19, con impulsi a frequenza di riga viene pilotato il transistor di pilotaggio TL 01. La necessaria tensione collettore fornisce l'alimentatore rete primario attraverso DP 13, che serve da diodo di disaccoppiamento.

Grazie alla tensione di soglia dei 3 diodi DP 21, DP 24, DP 03, è assicurato che in ordine di tempo al TL 01 prima risulta la tensione collettore e solo dopo il segnale di pilotaggio.

Attraverso il trasformatore di pilotaggio UL 01 il TL 02 riceve la necessaria corrente base per la sua funzione di commutazione. La tensione collettore del TL 02 viene portate al trasformatore di riga attraverso il fusibile FP 02 e LP 01, DP 14.

La deflessione orizzontale si avvia e produce nell'alimentatore rete secondario le tensioni di lavoro necessarie per l'apparecchio. Queste innanzitutto durante la fase di inserimento, senza funzione dell'alimentatore rete regolato, sono un po' basse e non stabilizzate.

Funzione di avviamento dell'alimentatore rete regolato

Il CP 10 prende carica attraverso RP 25 e DP 12. Se il potenziale di tensione all'emitter del TP 05 raggiunge la tensione base, aumentata del valore di soglia, esso va in conduzione e carica il CP 12 attraverso RP 23. La costante di tempo del circuito RC permette la nascita di una tensione a forma di dente di sega.

Schaltbildhinweise

⚠

Sicherheitszeichen

Diese Bauteile sind bei Reparaturen nur durch die vom Hersteller geprüften und angegebenen Originalteile zu ersetzen, um die vorgesehene Betriebssicherheit zu gewährleisten.

Alle nicht gekennzeichneten Dioden 1 N 4148
X = nicht angeschlossen

Circuit notes

⚠

Components designated by the safety symbol should, when necessary for repair, only be replaced by original parts produced and proofed by the manufacturer. Only then can the original operational safety be guaranteed.

Diodes not designated all 1 N 4148
X = not connected

Indicazione sullo schema

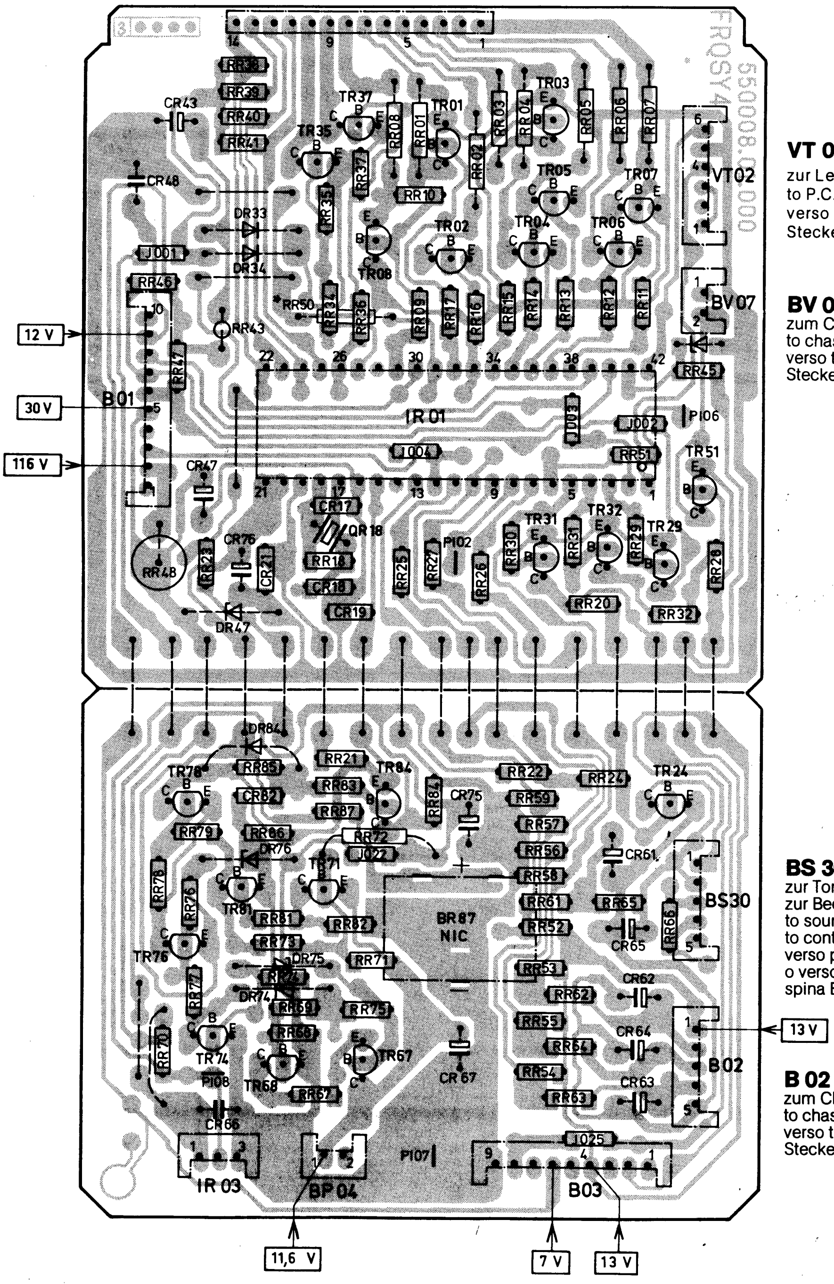
⚠

Contrassegno di sicurezza

Nel caso di riparazione **questi elementi devono** venire sostituito soltanto per **delle parti di** ricambio originali **controllati e designati da parte** del fabbricante **per garantire la sicurezza di funzionamento** prevista.

Tutti i diodi non contressegnati **1 N 4148**
X = non collegate

zur Anzeige
to indicator
verso indicazione


14
9
5
1
RR38
RR39
RR40
RR41
CR43
CR48
TR37
TR35
TR01
TR03
TR05
TR07
TR02
TR04
TR06
TR08
RR08
RR01
RR02
RR03
RR04
RR05
RR06
RR07
RR37
RR33
RR10
DR33
DR34
J001
RR46
*RR50
RR43
RR34
RR36
RR09
RR17
RR16
RR15
RR14
RR13
RR12
RR11
VT02
BV07
12 V
30 V
116 V
B01
RR47
22
26
30
34
38
42
IR 01
J003
J002
J004
RR51
RR45
PI06
TR51
21
17
13
9
5
1
CR47
CR17
QR18
RR18
CR18
CR19
CR76
CR21
RR23
RR48
DR47
PI02
RR25
RR27
RR26
RR30
TR31
RR31
TR32
RR29
TR29
RR28
RR20
RR32
DR84
TR78
RR85
CR82
RR79
RR86
RR21
RR83
RR87
TR84
RR84
CR75
RR22
RR59
RR24
TR24
RR57
RR56
RR58
CR61
DR76
RR72
J022
TR71
RR78
RR76
TR81
RR81
RR82
RR73
TR76
DR75
RR71
RR77
RR74
DR74
RR69
RR75
RR70
TR74
RR68
TR68
RR67
TR67
PI08
CR66
CR67
BR87
NIC
RR61
RR65
RR52
CR65
RR66
BS30
RR53
CR62
RR62
RR55
CR64
RR64
RR54
CR63
RR63
B02
13 V
J025
PI07
IR 03
BP 04
B03
11,6 V
7 V
13 V
550008.00.000
FRQSY4

VT 02
zur Leiterplatte Videotext
to P.C.B. Videotext
verso piastra Televideo
Stecker / plug / spina VT 02

BV 07
zum Chassis
to chassis
verso telaio
Stecker / Plug / Spina BV 07

B 01
zum Chassis
to chassis
verso telaio
Stecker / Plug / Spina B 01

BS 30
zur Ton-ZF, Stecker BS 30 bzw.
zur Bedienteilplatte, Stecker BS 32
to sound IF, plug BS 30 or
to control unit board, plug BS 32
verso piastra FI tono, spina BS 30
o verso piastra elemento di comando, spina BS 32

B 02
zum Chassis
to chassis
verso telaio
Stecker / Plug / Spina B 02

IR 03
zum Infrarot-Vorverstärker
to infra-red pre-amplifier
verso preamplificatore infra

BP 04
zum Netzteil
to power unit
verso sezione di rete
Stecker / Plug / Spina BP 04

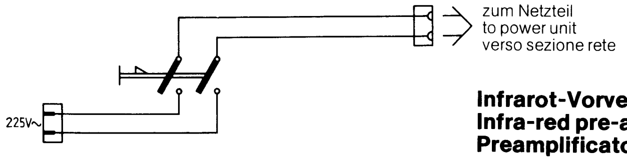
B 03
zum Chassis
to chassis
verso telaio
Stecker / Plug / Spina B 03

*RR 50 nur bei / only with / solo con Color 5537 VT Stereo

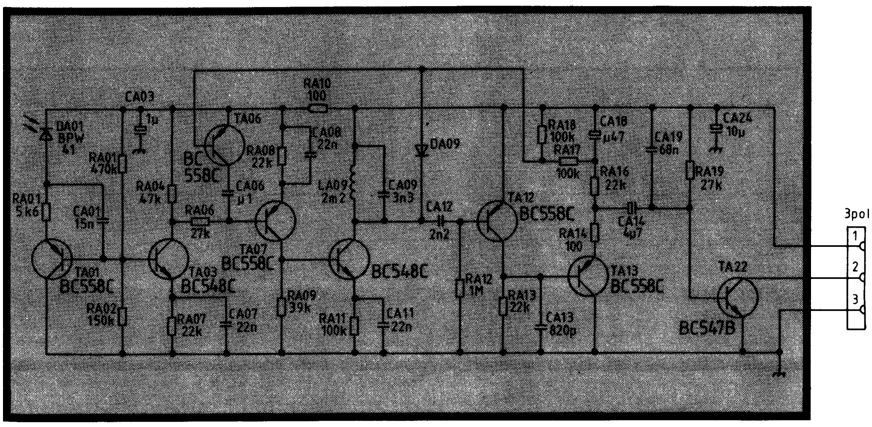
Systemplatte 2239
System board 2239 **592.690**
Piastra sistema 2239
Lötseite – Soldered side – Lato saldature

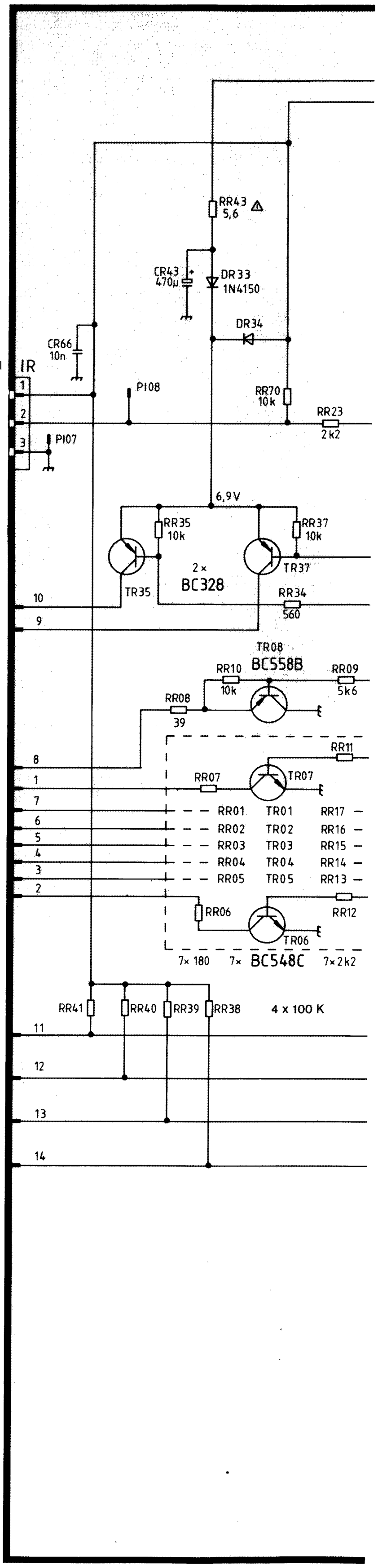
Systemplatte 2239 siehe Seite 6/7
System board 2239 see page 6/7
Piastra sistema 2239 vedi pagina 6/7
592.690

Netzschalter
Mains switch **473.804.6**
Interruttore di rete

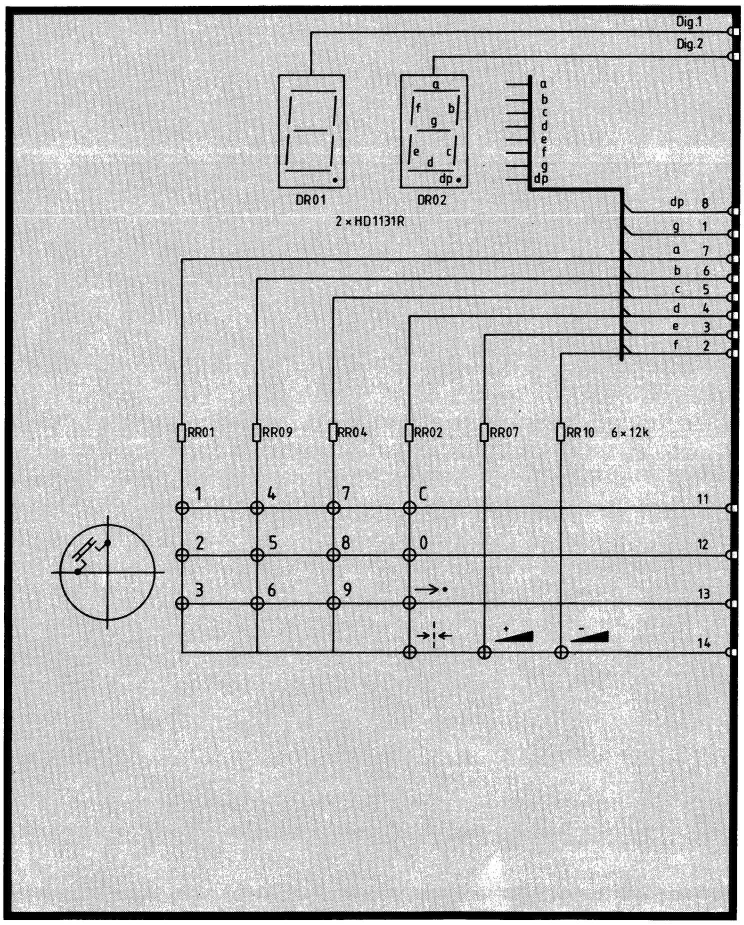

225V~
zum Netzteil
to power unit
verso sezione rete

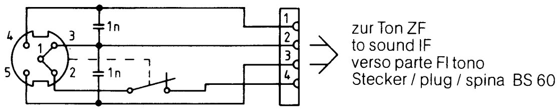
Infrarot-Vorverstärker
Infra-red pre-amplifier **583.521**
Preamplificatore infra


DA01 BPW 41
RA01 5k6
CA01 15n
TA01 BC558C
RA01 470k
RA02 150k
CA03 1µ
RA04 47k
BC 558C
TA06
TA03 BC548C
RA06 27k
RA07 22k
CA07 22n
RA08 22k
CA08 22n
CA06 µ1
TA07 BC558C
RA09 39k
RA10 100
LA09 2m2
CA09 3n3
BC548C
RA11 100k
CA11 22n
DA09
CA12 2n2
RA12 1M
TA12 BC558C
RA13 22k
CA13 820p
RA18 100k
RA17 100k
CA18 µ47
RA14 100
RA16 22k
CA14 4µ7
CA19 68n
TA13 BC558C
RA19 27k
CA24 10µ
TA22
BC547B
3pol
1
2
3


IR
1
2
3
CR66 10n
P108
P107
RR43 5,6
CR43 470µ
DR33 1N4150
DR34
RR70 10k
RR23 2k2
6,9V
RR35 10k
RR37 10k
2×
BC328
TR35
TR37
RR34 560
10
9
TR08
RR10 BC558B
10k
RR09 5k6
RR08 39
RR11
8
1
7
6
5
4
3
2
RR07
TR07
RR01 TR01 RR17
RR02 TR02 RR16
RR03 TR03 RR15
RR04 TR04 RR14
RR05 TR05 RR13
RR12
RR06
TR06
7× 180 7× BC548C 7×2k2
RR41
RR40
RR39
RR38
4 x 100 K
11
12
13
14

Bedienteilplatte
Control unit board
Piastra elemento di comando


Dig.1
Dig.2
a
b
c
d
e
f
g
dp
DR01
DR02
2×HD1131R
dp 8
g 1
a 7
b 6
c 5
d 4
e 3
f 2
RR01
RR09
RR04
RR02
RR07
RR10
6×12k
1
4
7
C
2
5
8
0
3
6
9
→•
→|←
11
12
13
14


1n
1n
4
3
1
2
5
1
2
3
4
zur Ton ZF
to sound IF
verso parte FI tono
Stecker / plug / spina BS 60

Kopfhörerbuchse
Headphone socket **677.454 B**
Presa per cuffia

Bedienteil
Control unit
Elemento di comando
telecontrol 2239
783.589 A

NORDMENDE

Color 3532 VT
Color 3537 VT

Modulliste · Module List · Lista moduli

Pos.	Art.-Nr. Part. No. No. articolo	Bezeichnung	Part	Descrizione
		FFS-Chassis F11 783.530.B 00 58		
		Bedienteil-Module:	**Control unit modules:**	**Moduli sez. comandi:**
–	784.583.A 00	1)**Bedienteil, rechts**	1)**Control unit, right**	1)**Sezione comandi, destra**
–	784.584.A 00	1)**Bedienteil, links**	1)**Control unit, left**	1)**Sezione comandi, sinistra**
R	592.715	**Leiterplatte, kpl., System 2436 (5 Volt)**	**P.C.B., cpl., system 2436 (5 Volt)**	**Piastra, cpl., sistema 2436 (5 Volt)**
P	592.701	**Leiterplatte, kpl., Netzteil**	**P.C.B., cpl., power supply**	**Piastra, cpl., di rete**
A	583.521	**Infra-Vorverstärker, kpl. (2239)**	**Infra-red pre-amplifier, cpl.**	**Preamplificatore infrarossi, cpl.**
B	583.519	**Infra-Geber, ABDY**	**Infra-red generator, ABDY**	**Telecomando infra, ABDY**
		Chassis-Module:	**Chassis modules:**	**Telaio del moduli:**
H	563.796	**HF-Block, kpl. (MTS 2020-S)**	**RF-block, cpl., (MTS 2020-S)**	**Modulo AF, cpl., (MTS 2020-S)**
S	592.672	**Ton-ZF-Modul**	**Sound-IF module**	**Modulo IF-audio**
C	592.675	**PAL-Decoder-Modul (MELF)**	**PAL-decoder module (MELF)**	**Modulo PAL-decoder (MELF)**
V	592.653	**Bildrohranschluß-Platine, kpl.**	**P.C.B., cpl., CRT socket**	**Piastra, cpl., zoccolo cinescopio**
		FFS-Chassis F11 783.533.B 00 74		
		Bedienteil-Module:	**Control unit modules:**	**Moduli sez. comandi:**
–	784.583.A 00	1)**Bedienteil, rechts**	1)**Control unit, right**	1)**Sezione comandi, destra**
–	784.584.A 00	1)**Bedienteil, links**	1)**Control unit, left**	1)**Sezione comandi, sinistra**
R	592.715	**Leiterplatte, kpl., System 2436 (5 Volt)**	**P.C.B., cpl., system 2436 (5 Volt)**	**Piastra, cpl., sistema 2436 (5 Volt)**
P	592.660	**Leiterplatte, kpl., Netzteil**	**P.C.B., cpl., power supply**	**Piastra, cpl., di rete**
A	583.521	**Infra-Vorverstärker, kpl. (2239)**	**Infra-red pre-amplifier, cpl.**	**Preamplificatore infrarossi, cpl.**
B	583.519	**Infra-Geber, ABDY**	**Infra-red generator, ABDY**	**Telecomando infra, ABDY**
		Chassis-Module:	**Chassis modules:**	**Telaio del moduli:**
H	563.796	**HF-Block, kpl. (MTS 2020-S)**	**RF-block, cpl., (MTS 2020-S)**	**Modulo AF, cpl., (MTS 2020-S)**
S	560.789.6	**Pseudo-Stereo-Ton-Modul**	**Sound-IF-stereo module**	**Modulo FI tono bi-audio**
P	592.688	**Leiterplatte, kpl., NF-Verstärker**	**P.C.B., cpl., AF amplifier**	**Piastra, cpl., amplificatore BF**
C	592.675	**PAL-Decoder-Modul (MELF)**	**PAL-decoder module (MELF)**	**Modulo PAL-decoder (MELF)**
V	592.653	**Bildrohranschluß-Platine, kpl.**	**P.C.B., cpl., CRT socket**	**Piastra, cpl., zoccolo cinescopio**

1)wird nicht komplett geliefert

Service-Hinweis

Bei Ersatzteilbestellungen bitte unbedingt die Ersatzteilnummer angeben. Vollständige Ersatzteillisten befinden sich auf Microfilm.

1)not supplied as a complete unit

Service Note

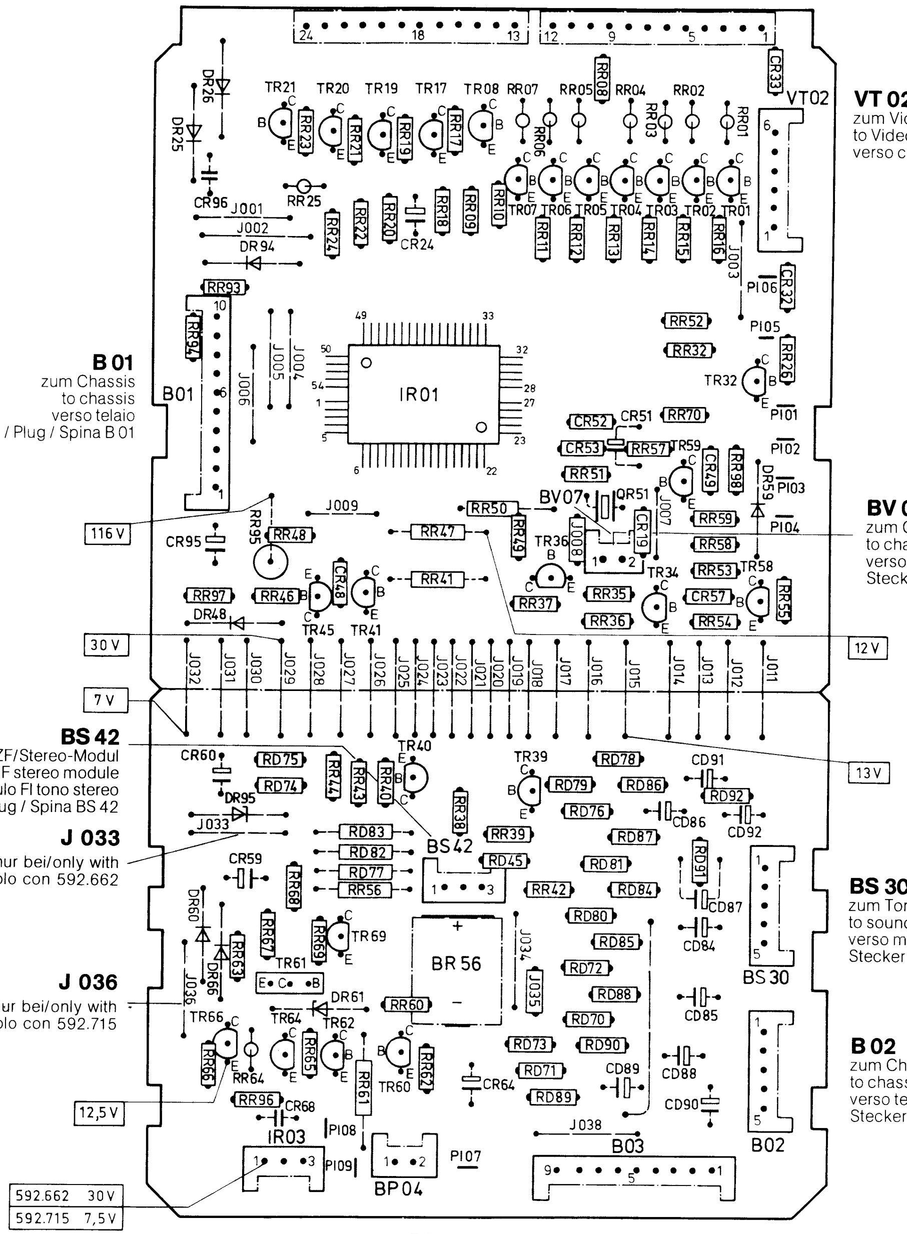
When ordering spare parts it is absolutely essential that the spare part no. be given. Complete spare parts lists can be taken from microfilm.

1)non viene fernito completo

Istruzione per il servizio assistenza

Per la consegna di parti di ricambio si pregha di indicare il numero della parte di ricambio. Liste parti ricambio complete si trovano su microfilm.

zur Anzeige
to indicator
verso indicazione


24
18
13
12
9
5
1
VT02
B01
IR01
BV07
BS42
BR 56
BS30
B02
B03
BP04
IR03
J033
J036
116 V
30 V
7 V
12 V
13 V
12,5 V
592.662 30V
592.715 7,5V

VT 02
zum Videotext-Nachrüstsatz
to Videotext retrofit set
verso corredo Televideo

B 01
zum Chassis
to chassis
verso telaio
Stecker / Plug / Spina B 01

BV 07
zum Chassis
to chassis
verso telaio
Stecker / Plug / Spina BV 07

BS 42
zum Ton-ZF/Stereo-Modul
to sound IF stereo module
verso modulo FI tono stereo
Stecker / Plug / Spina BS 42

J 033
nur bei/only with
solo con 592.662

BS 30
zum Ton-ZF/Stereo-Modul
to sound IF stereo module
verso modulo FI tono stereo
Stecker / Plug / Spina BS 30

J 036
nur bei/only with
solo con 592.715

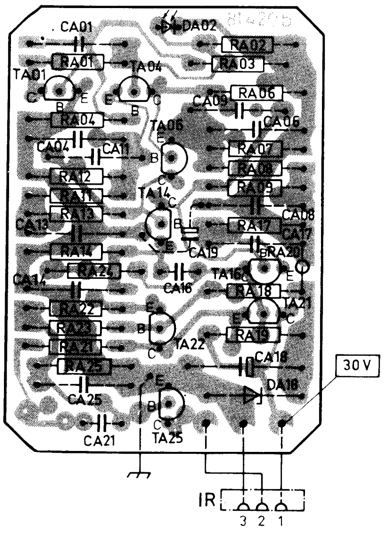
B 02
zum Chassis
to chassis
verso telaio
Stecker / Plug / Spina B 02

IR 03
zum Infrarot-
Vorverstärker
to infra-red
pre-amplifier
verso
preamplificatore infra

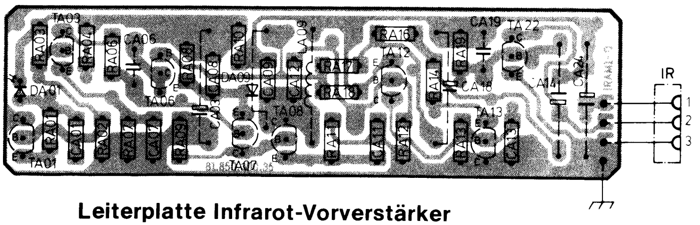
BP 04
zum Netzteil
to power unit
verso sezione di rete
Stecker / Plug / Spina BP 04

B 03
zum Chassis
to chassis
verso telaio
Stecker / Plug / Spina B 03

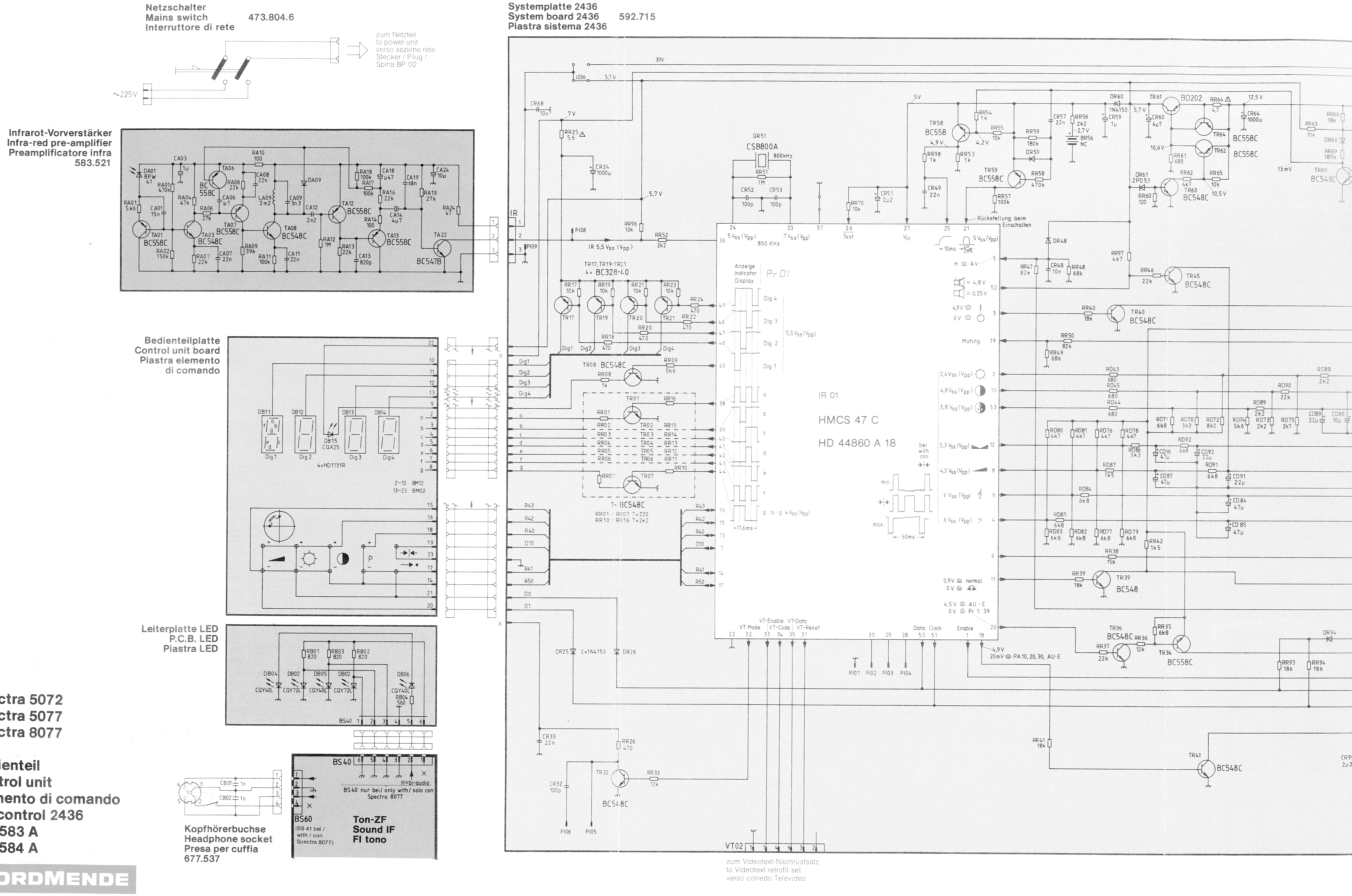
Systemplatte 2436
System board 2436 592.662/715
Piastra sistema 2436
Lötseite – Soldered side – Lato saldature


CA01
DA02
RA02
RA01
RA03
TA01
TA04
RA06
RA04
CA09
CA06
TA06
CA04
CA11
RA07
RA12
RA08
RA11
RA09
CA13
RA13
TA14
RA17
CA08
CA17
RA14
CA19
RA20
CA14
RA24
CA16
TA16
RA18
TA21
RA22
RA23
RA19
RA21
TA22
RA25
CA18
CA25
DA18
CA21
TA25
30 V
IR
3 2 1

Leiterplatte Infrarot-Vorverstärker
P.C.B., Infra-red pre-amplifier 583.513
Piastra preamplificatore infra
Lötseite – Soldered side – Lato saldature


TA03
CA06
RA16
CA19
TA22
TA12
DA01
TA06
DA03
RA17
RA18
TA14
CA18
CA14
TA13
TA08
TA01
TA07
IR
1
2
3

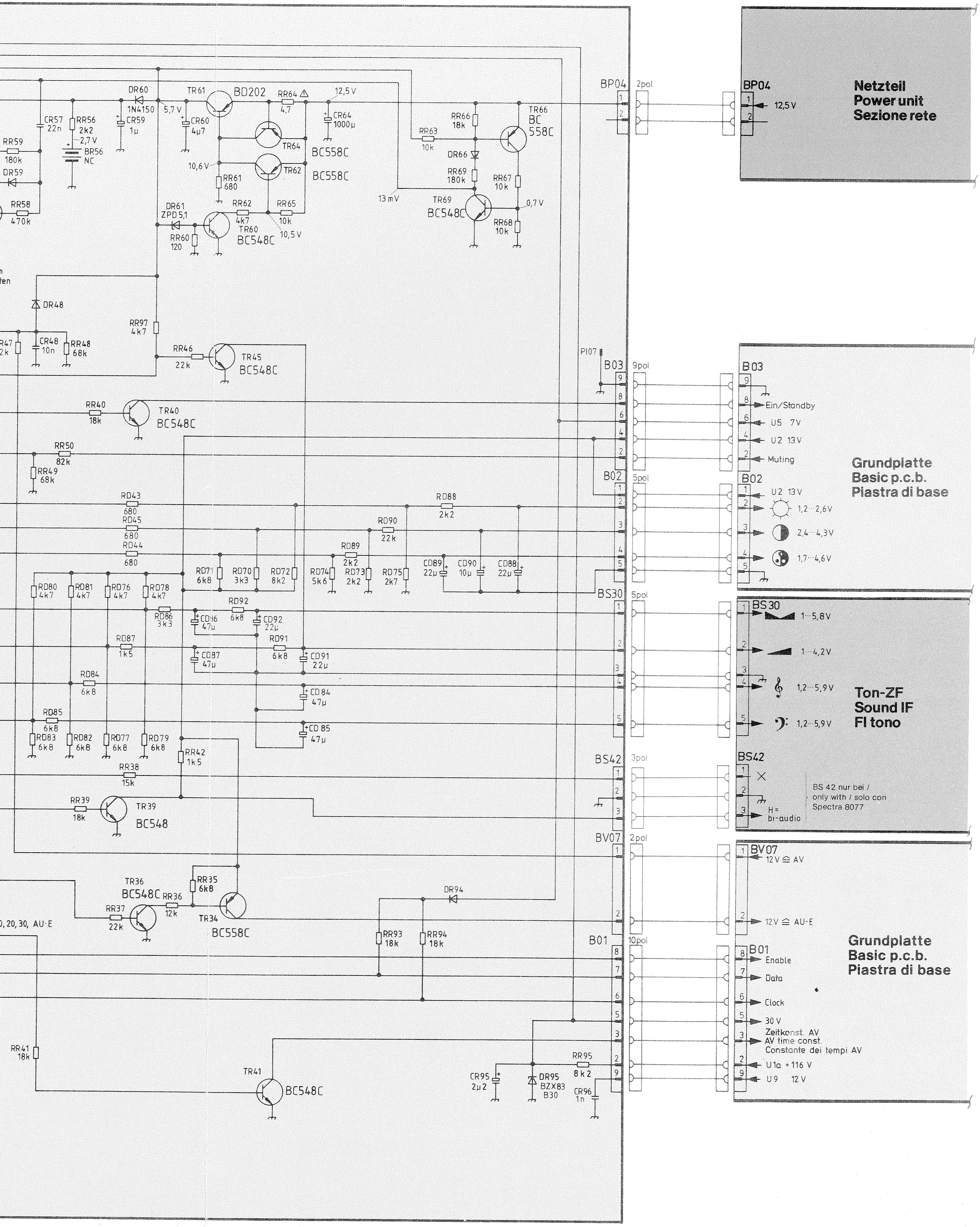
Leiterplatte Infrarot-Vorverstärker
P.C.B., Infra-red pre-amplifier 583.521
Piastra preamplificatore infra
Lötseite – Soldered side – Lato saldature


Netzschalter
Mains switch
Interruttore di rete
473.804.6
zum Netzteil
to power unit
verso sezione rete
Stecker / Plug /
Spina BP 02
~225V
Infrarot-Vorverstärker
Infra-red pre-amplifier
Preamplificatore infra
583.521
Systemplatte 2436
System board 2436
Piastra sistema 2436
592.715
Bedienteilplatte
Control unit board
Piastra elemento
di comando
4×HD1131R
2–12 BM12
13–23 BM02
Leiterplatte LED
P.C.B. LED
Piastra LED
Kopfhörerbuchse
Headphone socket
Presa per cuffia
677.537
BS40 nur bei/ only with/ solo con Spectra 8077
H=bi-audio
BS60
(BS 41 bei / with / con Spectra 8077)
Ton-ZF
Sound IF
FI tono
IR 01
HMCS 47 C
HD 44860 A 18
QR51
CSB800A
800kHz
Anzeige
Indicator
Display
Rückstellung beim Einschalten
Muting
TR17, TR19–TR21
4× BC328-40
7× BC548C
RR01 – RR07 7×220
RR10 – RR16 7×2k2
VT-Enable VT-Data
VT-Mode VT-Code VT-Reset
Data Clock
Enable
VT02
zum Videotext-Nachrüstsatz
to Videotext retrofit set
verso corredo Televideo
BD202
BC558C
BC548C
BC547B

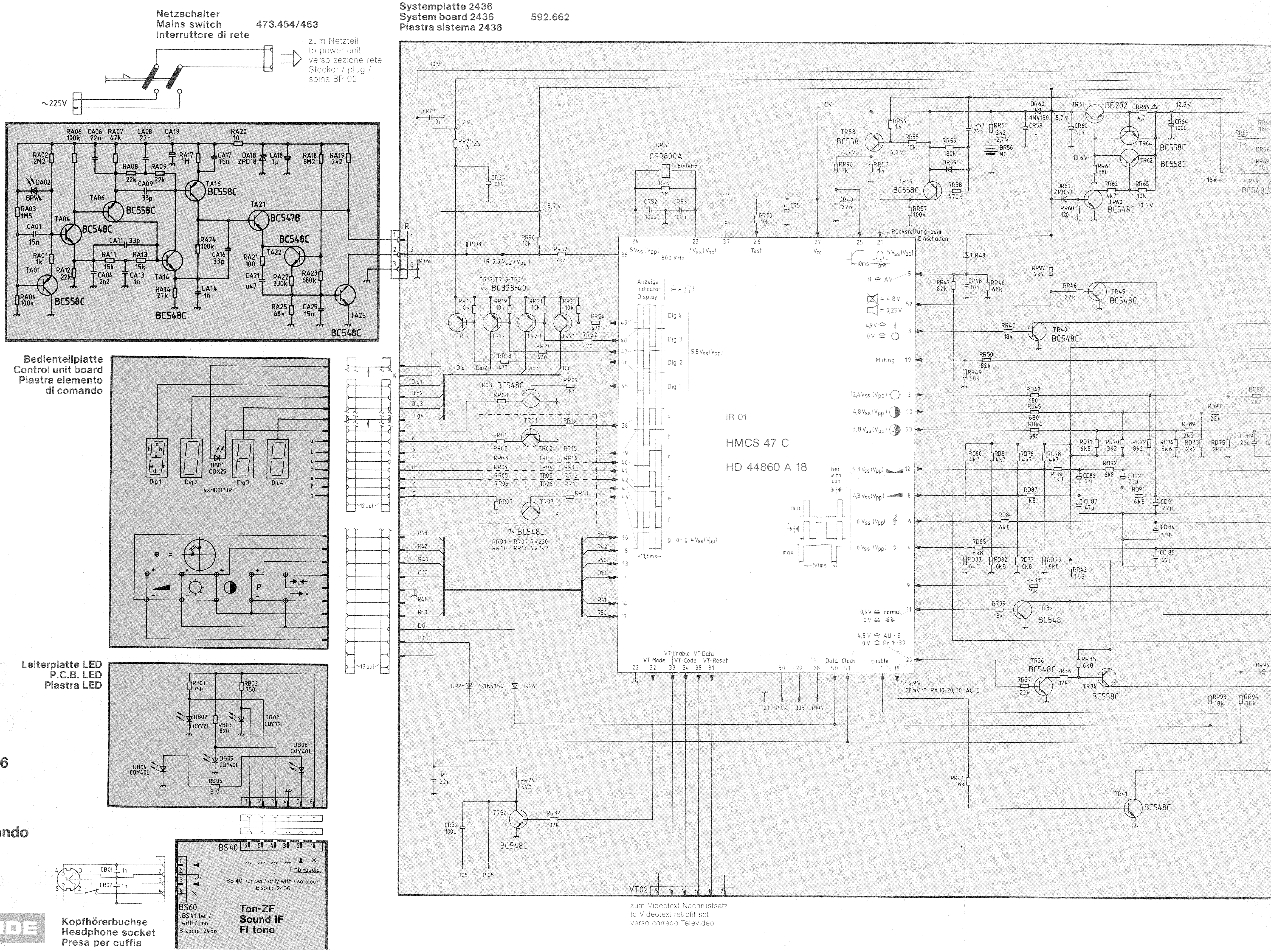
Spectra 5072
Spectra 5077
Spectra 8077

Bedienteil
Control unit
Elemento di comando
telecontrol 2436
784.583 A
784.584 A

NORDMENDE



Netzteil
Power unit
Sezione rete
BP04
2pol
12,5 V
DR60
1N4150
TR61
BD202
RR64
4,7
12,5 V
CR57
22n
RR56
2k2
2,7 V
BR56
NC
CR59
1µ
5,7 V
CR60
4µ7
CR64
1000µ
TR64
BC558C
TR62
BC558C
10,6 V
RR61
680
RR62
4k7
RR65
10k
10,5 V
TR60
BC548C
DR61
ZPD 5,1
RR60
120
RR59
180k
DR59
RR58
470k
RR63
10k
RR66
18k
TR66
BC
558C
DR66
RR69
180k
RR67
10k
13 mV
TR69
BC548C
0,7 V
RR68
10k
DR48
RR47
2k
CR48
10n
RR48
68k
RR97
4k7
RR46
22k
TR45
BC548C
PI07
B03
9pol
RR40
18k
TR40
BC548C
RR50
82k
RR49
68k
Ein/Standby
U5 7V
U2 13V
Muting
Grundplatte
Basic p.c.b.
Piastra di base
B02
5pol
U2 13V
1,2…2,6V
2,4…4,3V
1,7…4,6V
RD43
680
RD45
680
RD44
680
RD88
2k2
RD90
22k
RD89
2k2
RD71
6k8
RD70
3k3
RD72
8k2
RD74
5k6
RD73
2k2
RD75
2k7
CD89
22µ
CD90
10µ
CD88
22µ
RD80
4k7
RD81
4k7
RD76
4k7
RD78
4k7
RD86
3k3
RD92
6k8
CD16
47µ
CD92
22µ
BS30
5pol
1…5,8V
1…4,2V
1,2…5,9V
1,2…5,9V
Ton-ZF
Sound IF
FI tono
RD87
1k5
RD91
6k8
CD87
47µ
CD91
22µ
RD84
6k8
CD84
47µ
RD85
6k8
CD85
47µ
RD83
6k8
RD82
6k8
RD77
6k8
RD79
6k8
RR42
1k5
RR38
15k
BS42
3pol
×
H = bi-audio
BS 42 nur bei /
only with / solo con
Spectra 8077
RR39
18k
TR39
BC548
BV07
2pol
12V ≙ AV
12V ≙ AU·E
TR36
BC548C
RR35
6k8
RR36
12k
RR37
22k
TR34
BC558C
DR94
0, 20, 30, AU·E
RR93
18k
RR94
18k
B01
10pol
Enable
Data
Clock
30 V
Zeitkonst. AV
AV time const.
Costante dei tempi AV
U1a +116 V
U9 12 V
RR41
18k
TR41
BC548C
CR95
2µ2
DR95
BZX83
B30
RR95
8k2
CR96
1n

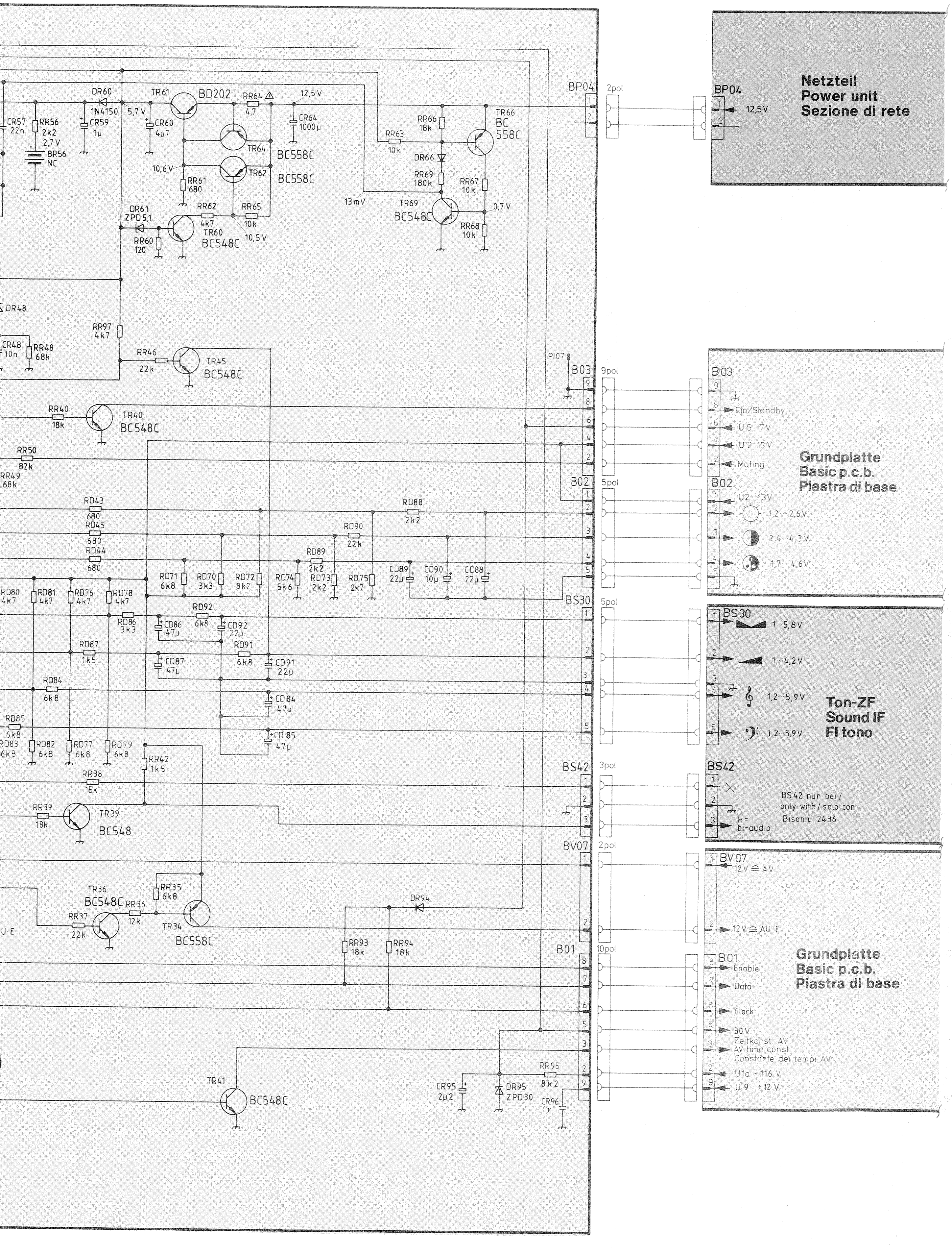


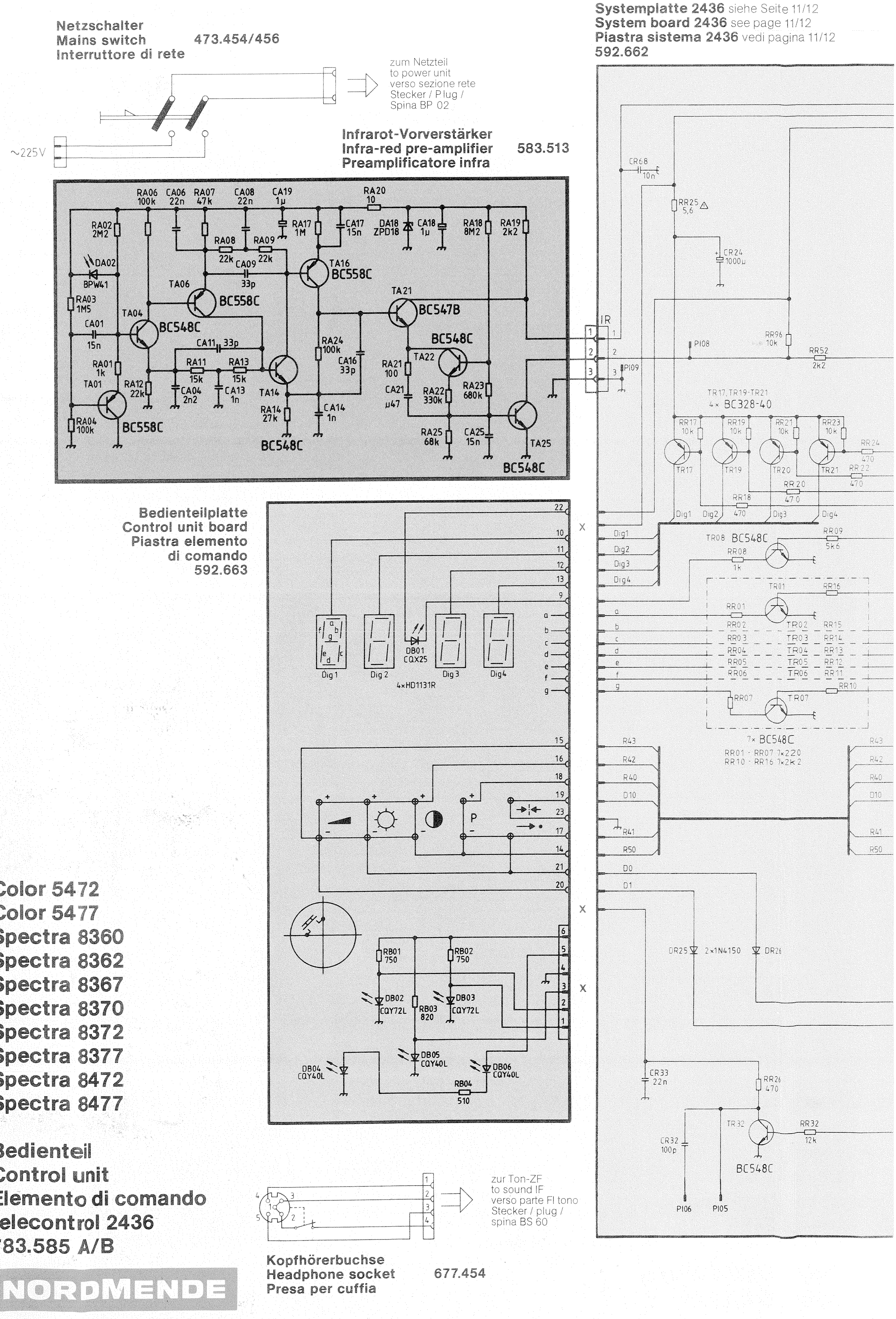
Netzschalter
Mains switch
Interruttore di rete
473.454/463
zum Netzteil
to power unit
verso sezione rete
Stecker / plug / spina BP 02
~225V
Systemplatte 2436
System board 2436
Piastra sistema 2436
592.662
Infrarot-Vorverstärker
Infra-red pre-amplifier
Preamplificatore infra
583.513
BPW41
BC548C
BC558C
BC547B
TA01
TA04
TA06
TA14
TA16
TA21
TA22
TA25
IR
Bedienteilplatte
Control unit board
Piastra elemento di comando
Dig1
Dig2
Dig3
Dig4
DB01 CQX25
4×HD1131R
12pol
13pol
Leiterplatte LED
P.C.B. LED
Piastra LED
DB02 CQY72L
DB04 CQY40L
DB05 CQY40L
DB06 CQY40L
Kopfhörerbuchse
Headphone socket
Presa per cuffia
BS40
H=bi-audio
BS 40 nur bei / only with / solo con Bisonic 2436
BS60
(BS41 bei / with / con Bisonic 2436
Ton-ZF
Sound IF
FI tono
QR51
CSB800A
800kHz
TR17,TR19-TR21
4× BC328-40
7× BC548C
RR01 - RR07 7×220
RR10 - RR16 7×2k2
IR 01
HMCS 47 C
HD 44860 A 18
Anzeige Indicator Display
Pr 01
Rückstellung beim Einschalten
Muting
Enable
VT-Mode
VT-Enable
VT-Code
VT-Data
VT-Reset
Data
Clock
Test
4,9V 20mV ≙ PA 10, 20, 30, AU·E
0,9V ≙ normal
4,5V ≙ AU·E
0V ≙ Pr. 1···39
BD202
BC558C
BC548
TR34
TR36
TR39
TR40
TR41
TR45
TR58
TR59
TR60
TR61
TR62
TR64
TR32
2×1N4150
P101
P102
P103
P104
P105
P106
VT02
zum Videotext-Nachrüstsatz
to Videotext retrofit set
verso corredo Televideo

Color 4430
Color 4432
Color 4437
Spectra 4070
Spectra 4072
Spectra 4077
Color Bisonic 2436

Bedienteil
Control unit
Elemento di comando
telecontrol 2436
783.587 A
783.588 A
784.586 A

NORDMENDE

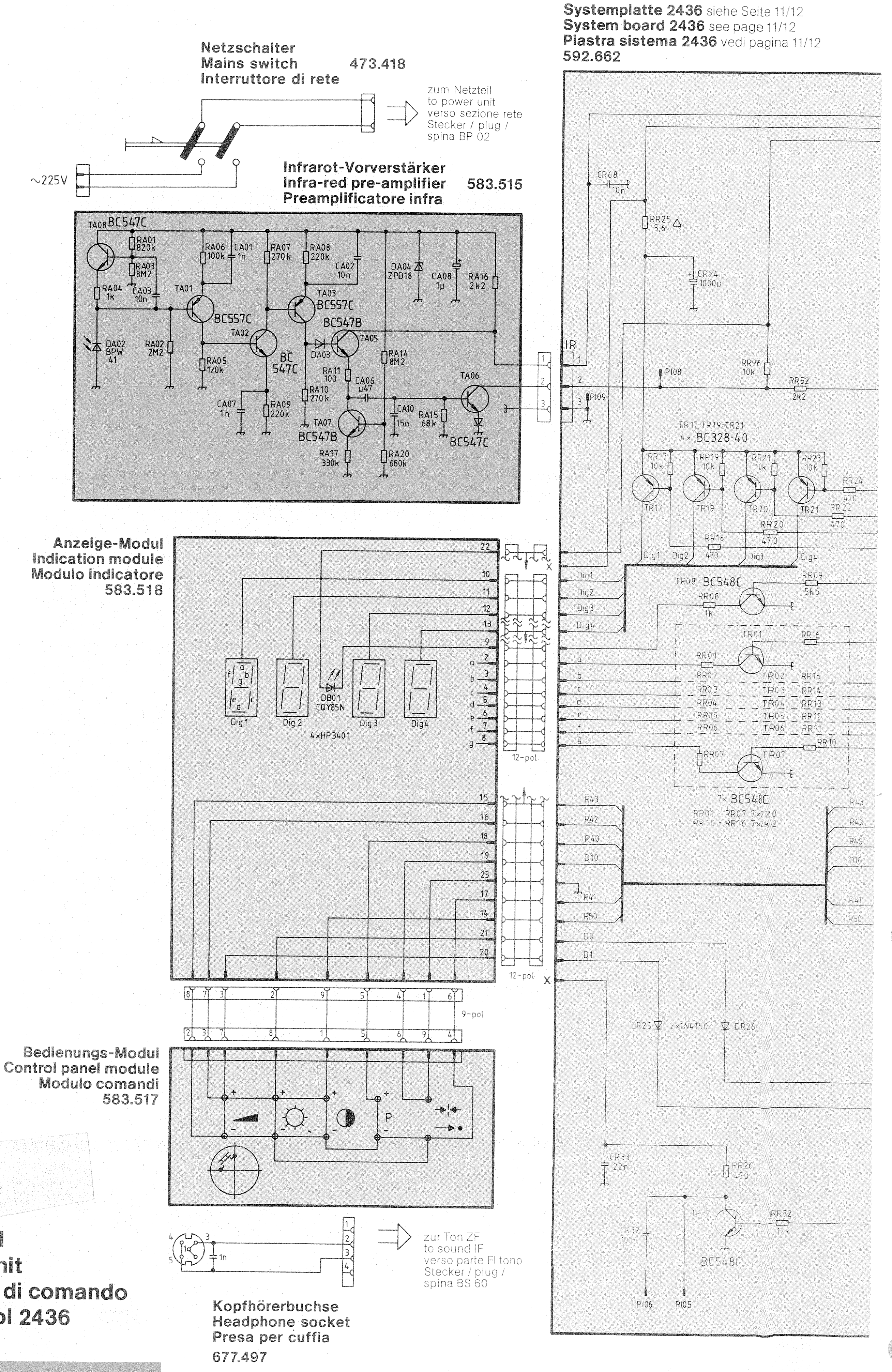

Netzteil
Power unit
Sezione di rete
BP04
2pol
12,5V
DR60
1N4150
TR61
BD202
RR64 ⚠
4,7
12,5 V
5,7 V
CR57
22n
RR56
2k2
2,7 V
BR56
NC
CR59
1µ
CR60
4µ7
CR64
1000µ
TR64
BC558C
TR62
BC558C
10,6 V
RR61
680
RR62
4k7
RR65
10k
10,5 V
DR61
ZPD5,1
RR60
120
TR60
BC548C
RR63
10k
RR66
18k
DR66
RR69
180k
TR66
BC
558C
RR67
10k
0,7 V
13 mV
TR69
BC548C
RR68
10k
DR48
RR97
4k7
CR48
10n
RR48
68k
RR46
22k
TR45
BC548C
PI07
B03
9pol
RR40
18k
TR40
BC548C
RR50
82k
RR49
68k
Ein/Standby
U 5 7V
U 2 13V
Muting
Grundplatte
Basic p.c.b.
Piastra di base
B02
5pol
U2 13V
1,2 ··· 2,6V
2,4 ··· 4,3V
1,7 ··· 4,6V
RD43
680
RD45
680
RD44
680
RD88
2k2
RD90
22k
RD89
2k2
RD71
6k8
RD70
3k3
RD72
8k2
RD74
5k6
RD73
2k2
RD75
2k7
CD89
22µ
CD90
10µ
CD88
22µ
RD80
4k7
RD81
4k7
RD76
4k7
RD78
4k7
RD86
3k3
RD92
6k8
CD86
47µ
CD92
22µ
RD87
1k5
CD87
47µ
RD91
6k8
CD91
22µ
RD84
6k8
CD84
47µ
RD85
6k8
RD83
6k8
RD82
6k8
RD77
6k8
RD79
6k8
CD85
47µ
RR42
1k5
RR38
15k
BS30
5pol
1 ··· 5,8V
1 ··· 4,2V
1,2 ··· 5,9V
1,2 ··· 5,9V
Ton-ZF
Sound IF
FI tono
BS42
3pol
H =
bi-audio
BS42 nur bei /
only with / solo con
Bisonic 2436
RR39
18k
TR39
BC548
BV07
2pol
12V ≙ AV
12V ≙ AU·E
TR36
BC548C
RR36
12k
RR35
6k8
RR37
22k
TR34
BC558C
AU·E
DR94
RR93
18k
RR94
18k
B01
10pol
Enable
Data
Clock
30V
Zeitkonst. AV
AV time const.
Constante dei tempi AV
U1a +116 V
U9 +12 V
RR95
8k2
CR95
2µ2
DR95
ZPD30
CR96
1n
TR41
BC548C


Netzschalter
Mains switch
Interruttore di rete
473.454/456
~225V
zum Netzteil
to power unit
verso sezione rete
Stecker / Plug /
Spina BP 02
Infrarot-Vorverstärker
Infra-red pre-amplifier
Preamplificatore infra
583.513
RA06 100k
CA06 22n
RA07 47k
CA08 22n
CA19 1µ
RA20 10
RA02 2M2
RA17 1M
CA17 15n
DA18 ZPD18
CA18 1µ
RA18 8M2
RA19 2k2
RA08 22k
RA09 22k
CA09 33p
DA02
BPW41
TA06
BC558C
TA16
BC558C
TA21
BC547B
RA03 1M5
TA04
BC548C
CA01 15n
CA11 33p
RA24 100k
BC548C
RA01 1k
TA01
RA11 15k
RA13 15k
CA16 33p
RA21 100
TA22
RA12 22k
CA04 2n2
CA13 1n
TA14
CA21 µ47
RA22 330k
RA23 680k
RA04 100k
BC558C
RA14 27k
CA14 1n
RA25 68k
CA25 15n
TA25
BC548C
BC548C
Systemplatte 2436 siehe Seite 11/12
System board 2436 see page 11/12
Piastra sistema 2436 vedi pagina 11/12
592.662
CR68 10n
RR25 5,6
CR24 1000µ
IR
1
2
3
P108
P109
RR96 10k
RR52 2k2
TR17, TR19-TR21
4× BC328-40
RR17 10k
RR19 10k
RR21 10k
RR23 10k
RR24 470
TR17
TR19
TR20
TR21
RR22 470
RR20 470
RR18 470
Dig1
Dig2
Dig3
Dig4
Bedienteilplatte
Control unit board
Piastra elemento
di comando
592.663
22
10
11
12
13
9
a
b
c
d
e
f
g
X
DB01
CQX25
Dig 1
Dig 2
Dig 3
Dig4
4×HD1131R
TR08 BC548C
RR09 5k6
RR08 1k
TR01
RR16
RR01
RR02
RR03
RR04
RR05
RR06
TR02
TR03
TR04
TR05
TR06
RR15
RR14
RR13
RR12
RR11
RR10
RR07
TR07
7× BC548C
RR01 - RR07 7×220
RR10 - RR16 7×2k2
15
16
18
19
23
17
14
21
20
P
R43
R42
R40
D10
R41
R50
D0
D1
DR25
2×1N4150
DR26
6
5
4
3
2
1
RB01 750
RB02 750
DB02 CQY72L
RB03 820
DB03 CQY72L
DB05 CQY40L
DB04 CQY40L
DB06 CQY40L
RB04 510
CR33 22n
RR26 470
TR32
RR32 12k
CR32 100p
BC548C
P106
P105
zur Ton-ZF
to sound IF
verso parte FI tono
Stecker / plug /
spina BS 60
Kopfhörerbuchse
Headphone socket
Presa per cuffia
677.454

Color 5472
Color 5477
Spectra 8360
Spectra 8362
Spectra 8367
Spectra 8370
Spectra 8372
Spectra 8377
Spectra 8472
Spectra 8477

Bedienteil
Control unit
Elemento di comando
telecontrol 2436
783.585 A/B

NORDMENDE


Systemplatte 2436 siehe Seite 11/12
System board 2436 see page 11/12
Piastra sistema 2436 vedi pagina 11/12
592.662
Netzschalter
Mains switch 473.418
Interruttore di rete
zum Netzteil
to power unit
verso sezione rete
Stecker / plug /
spina BP 02
~225V
Infrarot-Vorverstärker
Infra-red pre-amplifier 583.515
Preamplificatore infra
TA08 BC547C
RA01 820k
RA03 8M2
RA04 1k
CA03 10n
TA01
BC557C
DA02 BPW 41
RA02 2M2
RA06 100k
CA01 1n
RA05 120k
TA02
BC 547C
CA07 1n
RA09 220k
RA07 270k
RA08 220k
CA02 10n
TA03
BC557C
BC547B
DA03
TA05
RA11 100
RA10 270k
CA06 µ47
TA07
BC547B
RA17 330k
DA04 ZPD18
CA08 1µ
RA16 2k2
RA14 8M2
CA10 15n
RA15 68k
RA20 680k
TA06
BC547C
IR
CR68 10n
RR25 5,6
CR24 1000µ
PI08
PI09
RR96 10k
RR52 2k2
TR17, TR19-TR21
4× BC328-40
RR17 10k
RR19 10k
RR21 10k
RR23 10k
RR24 470
RR22 470
RR20 470
RR18 470
TR17
TR19
TR20
TR21
Dig1
Dig2
Dig3
Dig4
Anzeige-Modul
Indication module
Modulo indicatore
583.518
Dig 1
Dig 2
DB01 CQY85N
Dig 3
Dig4
4×HP3401
12-pol
TR08 BC548C
RR08 1k
RR09 5k6
TR01
RR16
RR01
RR02
RR03
RR04
RR05
RR06
TR02
TR03
TR04
TR05
TR06
RR15
RR14
RR13
RR12
RR11
RR07
TR07
RR10
7× BC548C
RR01 - RR07 7×220
RR10 - RR16 7×2k2
R43
R42
R40
D10
R41
R50
D0
D1
9-pol
DR25
2×1N4150
DR26
Bedienungs-Modul
Control panel module
Modulo comandi
583.517
P
CR33 22n
RR26 470
TR32
CR32 100p
RR32 12k
BC548C
PI06
PI05
zur Ton ZF
to sound IF
verso parte FI tono
Stecker / plug /
spina BS 60
1n
Kopfhörerbuchse
Headphone socket
Presa per cuffia
677.497

Color

Bedienteil
Control unit
Elemento di comando
telecontrol 2436

NORDMENDE

Schaltbildhinweise

⚠

Sicherheitszeichen

Diese Bauteile sind bei Reparaturen nur durch die vom Hersteller geprüften und angegebenen Originalteile zu ersetzen, um die vorgesehene Betriebssicherheit zu gewährleisten.

Alle nicht gekennzeichneten Dioden 1 N 4148

X = nicht angeschlossen

Circuit notes

⚠

Components designated by the safety symbol should, when necessary for repair, only be replaced by original parts produced and proofed by the manufacturer. Only then can the original operational safety be guaranteed.

Diodes not designated all 1 N 4148

X = not connected

Indicazione sullo schema

⚠

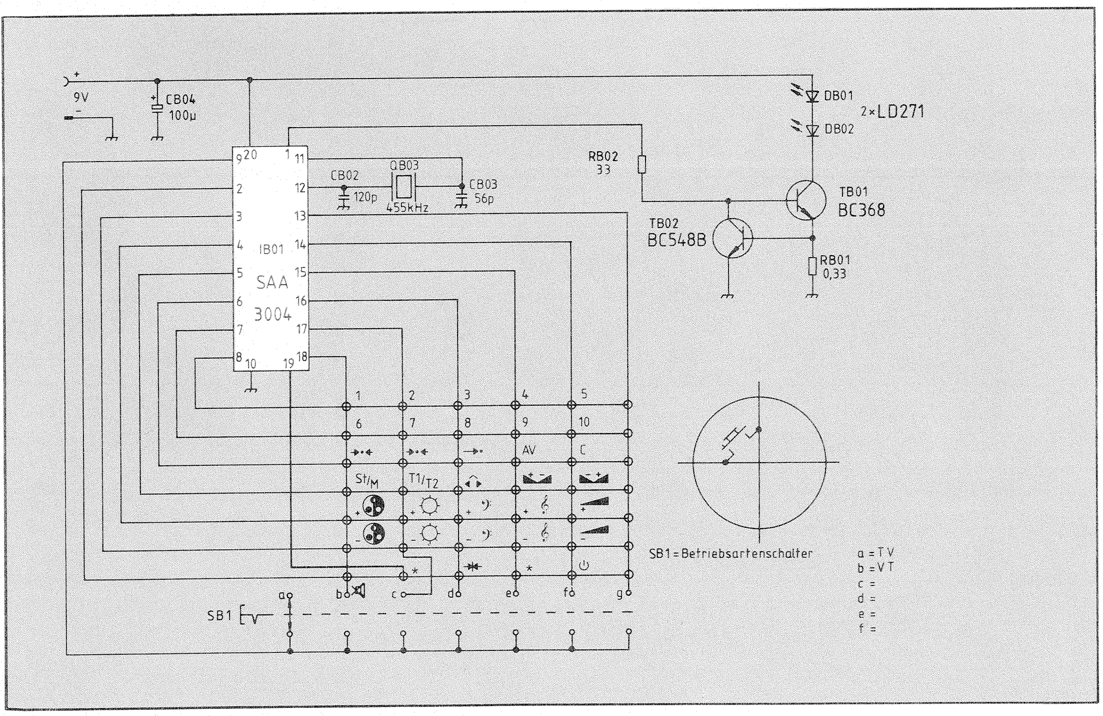
Contrassegno di sicurezza

Nel caso di riparazione questi elementi devono venire sostituito soltanto per delle parti di ricambio originali controllati e designati da parte del fabbricante per garantire la sicurezza di funzionamento prevista.

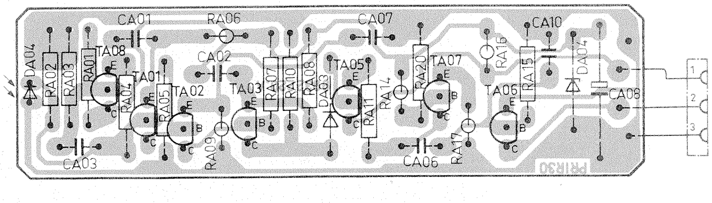
Tutti i diodi non contressegnati 1 N 4148

X = non collegate

Infrarot-Geber
Infra-red generator **583.504/519**
Telecomando infrarossi


9V
CB04
100µ
IB01
SAA
3004
CB02
120p
QB03
455kHz
CB03
56p
RB02
33
DB01
DB02
2×LD271
TB01
BC368
TB02
BC548B
RB01
0,33
AV
C
St/M
T1/T2
SB1
SB1 = Betriebsartenschalter
a = TV
b = VT
c =
d =
e =
f =

* nur bei
only with 583.519
solo con


CA01
RA06
CA07
CA10
DA04
RA02
RA03
RA01
TA08
TA01
RA04
RA05
TA02
CA02
TA03
RA07
RA10
RA08
DA03
TA05
RA14
RA11
RA20
TA07
RA16
RA15
TA06
DA01
CA08
RA09
CA03
CA06
RA17
1
2
3

Leiterplatte Infrarot-Vorverstärker
P.C.B., Infra-red pre-amplifier **583.515**
Piastra preamplificatore infra
Lötseite – Soldered side – Lato saldature

Deutschland

NORDMENDE
Vertriebs-GmbH & Co. OHG

2800 **Bremen 44**
Technischer Kundendienst
und Ersatzteilwesen
Funkschneise 5-9
Tel. 04 21 / 45 85-1

NORD
2000 **Hamburg 20**
Zweigniederlassung Nord
Hoheluftchaussee 38
Tel.: 0 40 / 42 10 80

1000 **Berlin 15**
Zweigniederlassung Nord
Verkaufsbüro Berlin
Kurfürstendamm 182 – 183
Tel. 0 30 / 88 40 21

2800 **Bremen 44**
Zweigniederlassung Nord
Verkaufsbüro Bremen
Funkschneise 13
Tel.: 04 21 / 45 60 42

3012 **Langenhagen 7**
Zweigniederlassung Nord
Verkaufsbüro Hannover
Berliner Allee 2/4
Tel.: 05 11 / 7 40 00-0

WEST
4300 **Essen 12**
Zweigniederlassung West
Teilungsweg 29
Tel.: 02 01 / 3 19 31

4600 **Dortmund**
Zweigniederlassung West
Verkaufsbüro Dortmund
Olpe 16
Tel. 02 31 / 52 84 07/09

4000 **Düsseldorf 1**
Zweigniederlassung West
Verkaufsbüro Düsseldorf
Adlerstraße 32
Tel. 02 11 / 36 20 40 / 48 / 49

5000 **Köln 1**
Zweigniederlassung West
Verkaufsbüro Köln
Bonner Wall 27
Tel.: 02 21 / 37 20 27/29

RHEIN-MAIN
6057 **Dietzenbach-Steinberg**
Zweigniederlassung Rhein-Main
Karl-Benz-Straße 1
Tel.: 0 60 74 / 4 06-0

3501 **Kassel-Fuldabrück 1**
Zweigniederlassung Rhein-Main
Verkaufsbüro Kassel
Ostring 34
Tel. 05 61 / 58 20 51 / 52

6800 **Mannheim-Neckarau**
Zweigniederlassung Rhein-Main
Verkaufsbüro Mannheim
Floßwörthstraße 31-33
Tel. 06 21 / 85 30 94

8500 **Nürnberg-Langwasser**
Zweigniederlassung Rhein-Main
Verkaufsbüro Nürnberg
Lübener Straße 26-28
Tel. 09 11 / 8 02 46

6600 **Saarbrücken**
Zweigniederlassung Rhein-Main
Saargemünder Straße 89a
Tel.: 06 81 / 85 45 00

SÜD
8000 **München 46**
Zweigniederlassung Süd
Heidemannstraße 166c
Tel.: 0 89 / 31 63 41

7800 **Freiburg**
Zweigniederlassung Süd
Verkaufsbüro Freiburg
Wöhlerstraße 11
Tel.: 07 61 / 50 80 66

8400 **Regensburg**
Zweigniederlassung Süd
Verkaufsbüro Regensburg
Donaustaufer Straße 172
Tel. 09 41 / 4 70 42 / 43

7022 **Leinfelden-**
Echterdingen 2
Zweigniederlassung Süd
Verkaufsbüro Stuttgart
Max-Eyth-Straße 3
Tel. 07 11 / 79 70 35-39

Europa

Andorra
AFE-IMPORT / ANDIMESA
4, Plaza d'Andorra
Andorra – La Vella

Belgien
RADELCO N.V.
Italiëlei 179
B-2000 Antwerpen

Dänemark
K. K. Skjødt & Co. A.P.S.
Artillerievej 90
2300 København S

England
European Electronics Corp. Limited
Units 8 and 9
Faraday Road – Rabans Lane
Aylesbury Bucks HP 19 3 RY

Finnland
FINNMENDE OY
Takkatie, 10
SF-00370 Helsinki 37

Frankreich
STEV (Service Télévision)
63 A, rue d'Illzach
68100 Mulhouse

Frankreich
SRAMEE
12, Avenue de l'Yser
78800 Houilles

Griechenland
TEVELLAS-NORDMENDE A.B.E.
Lamia National Road
Athen

Irland
Reynolds Electronics Ltd.
Finnabair Industrial Park
Dundalk Co. Louth
Irland

Island
RADIO BUDIN
Klapparstig 26
Reykjavik

Italien
S.E.I.
Via Emilia 52-54
40064 Ozzano Emilia/Bologna

Kanarische Inseln/Spanien
COMERCIAL BOLSUR S.L.
Apartado 784
Santa Cruz de Tenerife
Islas Canarias/ESPANA

Luxemburg
LESSEL FRERES
21, rue Philippe II
Luxembourg

Niederlande
KOELRAD B.V.
Maalderij 19
1185 ZB Amstelveen

Norwegen
FRIGO NORSK, John Bryhn
Bjœrnstjerne, Bjœrnsonsgate 60
3000 DRAMMEN

Österreich
SDN Unterhaltungselektronische
Geräte Vertriebsges.m.b.H.
Eduard Kittenbergerg. 56,
Objekt 7
A-1235 Wien

Portugal
MADUREIRA & SOARES Lda.
Rua Sa da Bandeira 610
Porto

Schweden
SDN Distribution AB
Frövingegatan 14
Box 2044
S-421 02 Västra Frölunda

Schweiz
SEYFFER & CO. AG
Haus zur Europabrücke
Hohlstraße 550
8048 Zürich

Spanien
Rápida, S. A.
Rambla Cataluña, 7-9
Barcelona (7)

Türkei
Bekoteknik Sanayi A. S.
Karaagac Cadd. 2/4
Sütlüce-Istanbul

Zypern
Moneta General Enterprises Ltd.
P.O. Box 3969
Nicosia, Zypern

Übersee

Ägypten
A.O.I. – Arab Organization
for Industrialization
P.O. Box 84
Heliopolis – Cairo Egypt

Ägypten
Salem Ouda Salem
NORDMENDE Service Center
56 b Damascus Street
Mohandesin City – Cairo

Algerien
E.N.A.P.A.T. (EX-SONACAT)
87, Boulevard Mohamed V
Alger

Australien
J.B.C. Nordmende
99-105 Queensbridge street
South Melburne 3205
Victoria, Australia

Hongkong
Forward Intern. Corp. Ltd.
RMS. 2801-4
International Building
141, Des Voeux Road Central
Hongkong

Indonesien
P.T. Central Intone Intern. Ltd.,
P.O. Box 737, Jakarta

Irak
Iraqi Trading Company
P.O.B. 17, Bagdad

Jordanien
JSSA MURRAD & SONS & CO.
Mezdar Street
P.O. Box 6549, Amman

Kenya
BS Mohindra & Co. Ltd.
Mfangano Street, Avon House
P.O. Box 41832, Nairobi

Kuwait
Maseelah Trading Comp. W.L.L.
Canada-Dry-Street,
Shuwaikh Kuwait

Libanon
TELETRADE S.A.R.L.
516 Corniche du Fleuve
P.O. Box 11-0125
Beirut

Libyen
THE GENERAL ELECTRONICS C
P.O. Box 2068
Benghazi

Malaysia
Wah Chang Intern. Corp.
P.O. Box 6540 Kg. Tunku
Selangor

Nigeria
Universal Electronics
17/19, Abebe Village Rd. Iganmu
P.O. Box 2391
Lagos

Pakistan
Associated Electronics Ltd.
7, Egerton Road
P.O.B. 353
Lahore

Saudi Arabien
MAHMOOD SALEH ABBAR
P.O. Box 461
Jeddah

Singapore – 7
Forward International
Singapore (Private) Limited
177 F, Selegie Complex
Selegie Road

Sri Lanka
Shamin Group Limited
145, Kinsey Road
P.O. Box 1802
Colombo

Sudan
Sheet Metal Industries Ltd.
P.O. Box 112
Khartoum

Thailand
VanichNORDMENDE Part,
277, Rachdamri Road,
Bangkok Plaza Centre

Tunesien
Société Générale
d'Electronique
2, Rue Charles de Gaulle
Tunis

Uruguay
Plisol SA.
Avda. D. Fernandez
Crespo 2117
Montevideo

Vereinigte Arabische Emirate
Allied Electronics Ltd.
P.O. Box 4418 / Dubai
General Enterprises Co.
P.O.B. 89
Abu Dhabi

NORDMENDE

SERVICE-CENTER

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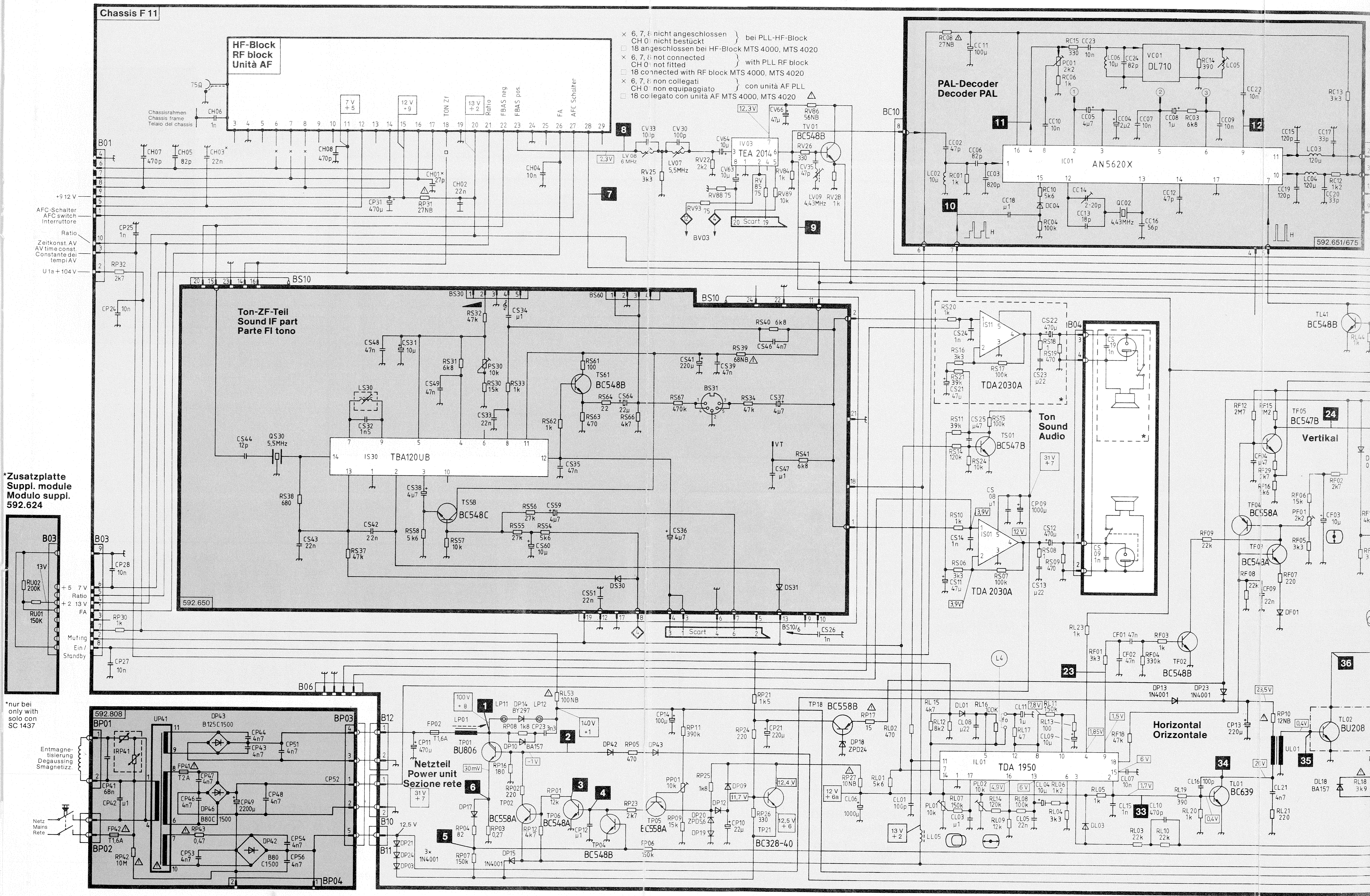
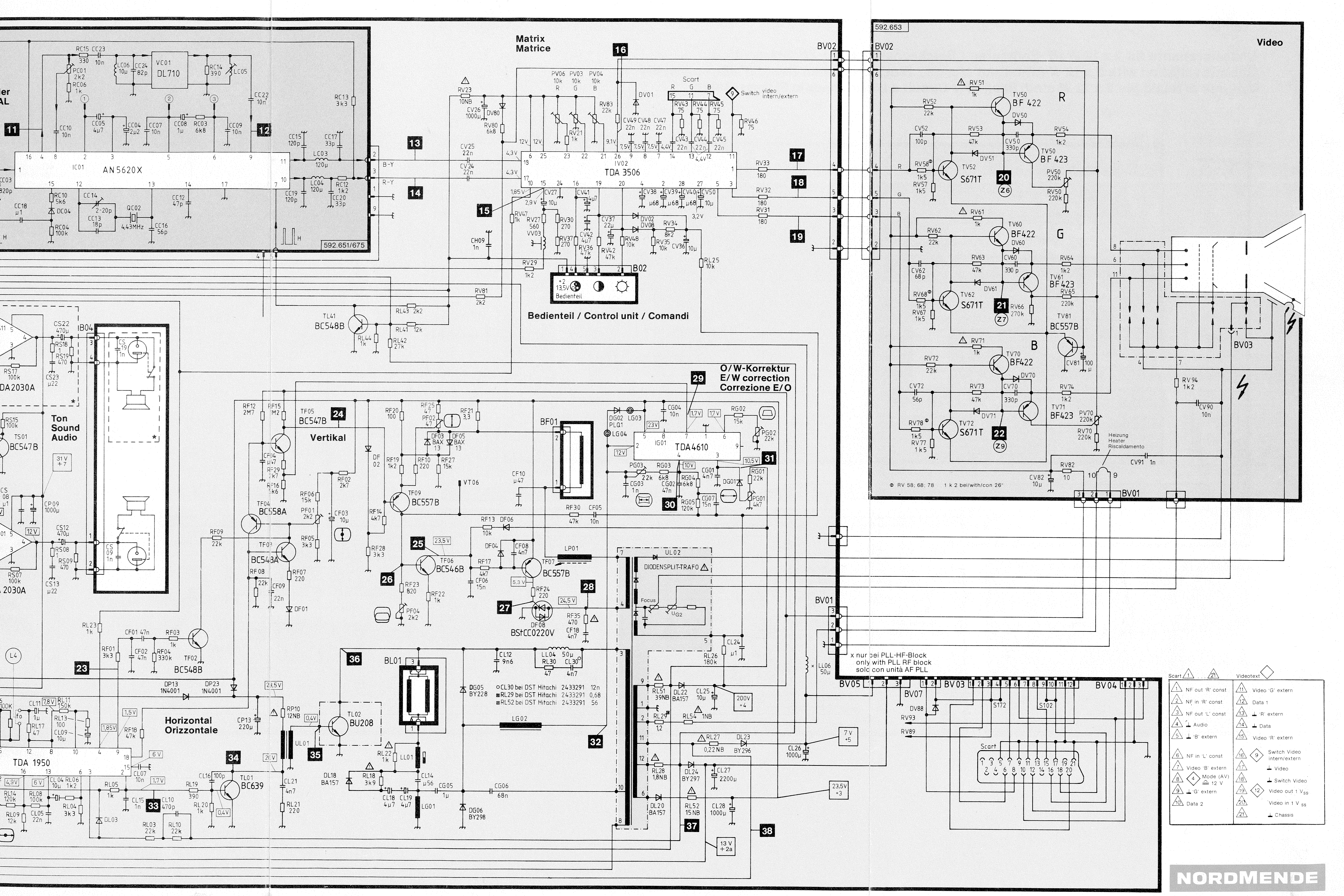

Chassis F 11
HF-Block
RF block
Unità AF
Chassisrahmen
Chassis frame
Telaio del chassis
+9 12 V
AFC-Schalter
AFC switch
Interruttore
Ratio
Zeitkonst. AV
AV time const.
Constante dei tempi AV
U 1a + 104 V
*Zusatzplatte
Suppl. module
Modulo suppl.
592.624
PAL-Decoder
Decoder PAL
AN5620X
DL710
TEA 2014
BC548B
Ton-ZF-Teil
Sound IF part
Parte FI tono
TBA120UB
BC548C
592.650
TDA2030A
Ton
Sound
Audio
BC547B
TDA 2030A
592.651/675
Vertikal
BC547B
BC558A
BC548B
592.808
Entmagne-tisierung
Degaussing
Smagnetizz.
Netz
Mains
Rete
Netzteil
Power unit
Sezione rete
BU806
BC558A
BC548A
BC548B
BC558A
BC328-40
BC558B
TDA 1950
Horizontal
Orizzontale
BC639
BU208
BC548B
1
2
3
4
5
6
7
8
9
10
11
12
23
24
33
34
35
36

× 6, 7, 8 nicht angeschlossen
CH 01 nicht bestückt } bei PLL-HF-Block
□ 18 angeschlossen bei HF-Block MTS 4000, MTS 4020
× 6, 7, 8 not connected
CH 01 not fitted } with PLL RF block
□ 18 connected with RF block MTS 4000, MTS 4020
× 6, 7, 8 non collegati
CH 01 non equipaggiato } con unità AF PLL
□ 18 collegato con unità AF MTS 4000, MTS 4020

*nur bei
only with
solo con
SC 1437

---

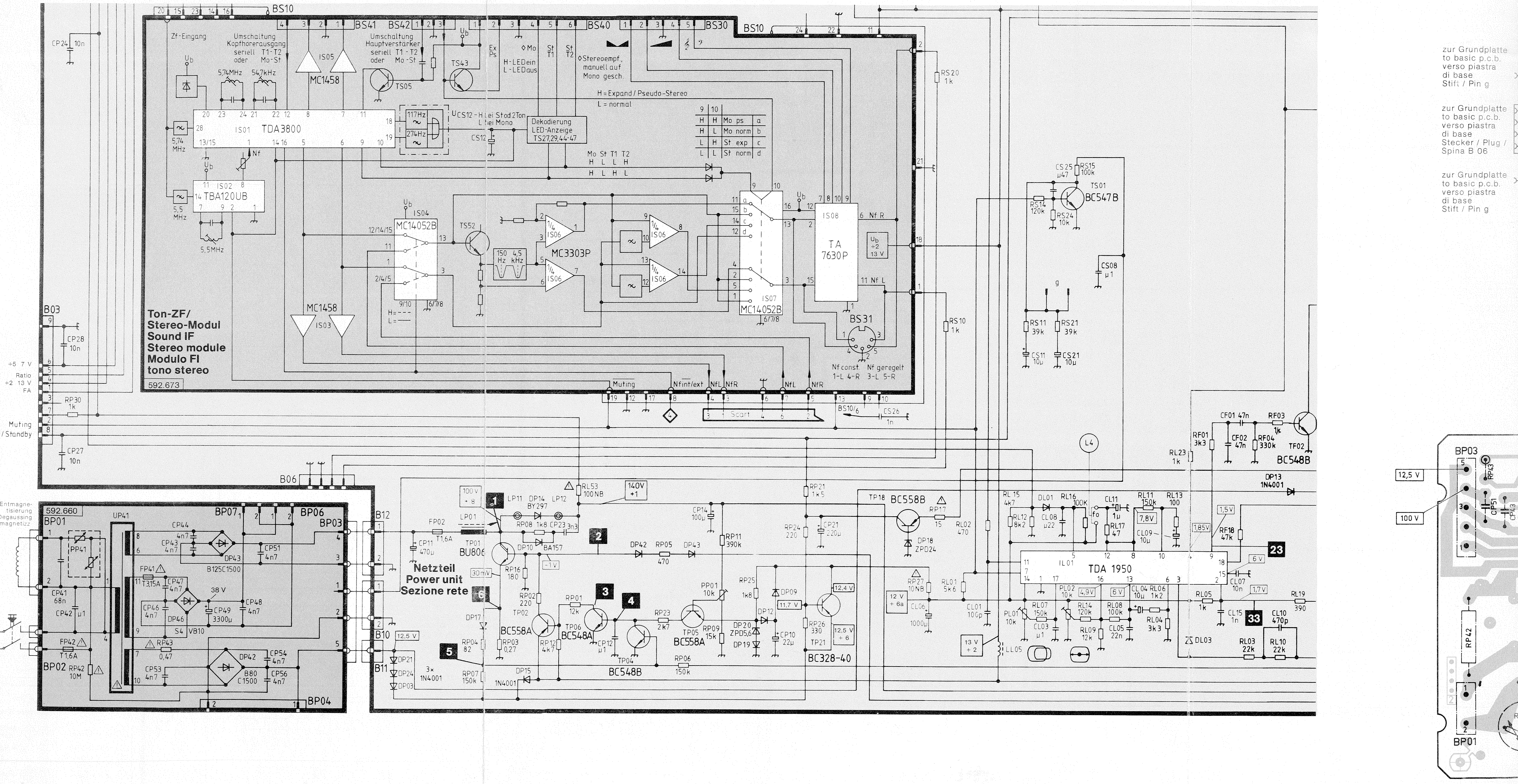
*nicht in allen Geräten vorhanden
not fitted to all models


Matrix
Matrice
TDA 3506
AN5620X
DL710
592.651/675
592.653
Video
BV02
BF 422
BF 423
S671T
BC557B
R
G
B
Bedienteil / Control unit / Comandi
Bedienteil
Scart
Switch video intern/extern
O/W-Korrektur
E/W correction
Correzione E/O
TDA4610
Vertikal
BC547B
BC557B
BC558A
BC543A
BC546B
BC557B
BSt CC0220V
Ton
Sound
Audio
TDA2030A
BC548B
DIODENSPLIT-TRAFO
Focus
Horizontal
Orizzontale
TDA 1950
BU208
BC639
Heizung
Heater
Riscaldamento
x nur bei PLL-HF-Block
only with PLL RF block
solo con unità AF PLL
BV01
BV03
BV04
BV05
BV07
Scart
NF out 'R' const
NF in 'R' const
NF out 'L' const
Audio
'B' extern
NF in 'L' const
Video 'B' extern
Mode (AV) 12 V
'G' extern
Data 2
Videotext
Video 'G' extern
Data 1
'R' extern
Data
Video 'R' extern
Switch Video intern/extern
Video
Switch Video
Video out 1 Vss
Video in 1 Vss
Chassis
○CL30 bei DST Hitachi 2433291 12n
⊠RL29 bei DST Hitachi 2433291 0,68
⊠RL52 bei DST Hitachi 2433291 56
⊕ RV 58; 68; 78 1 k 2 bei/with/con 26"

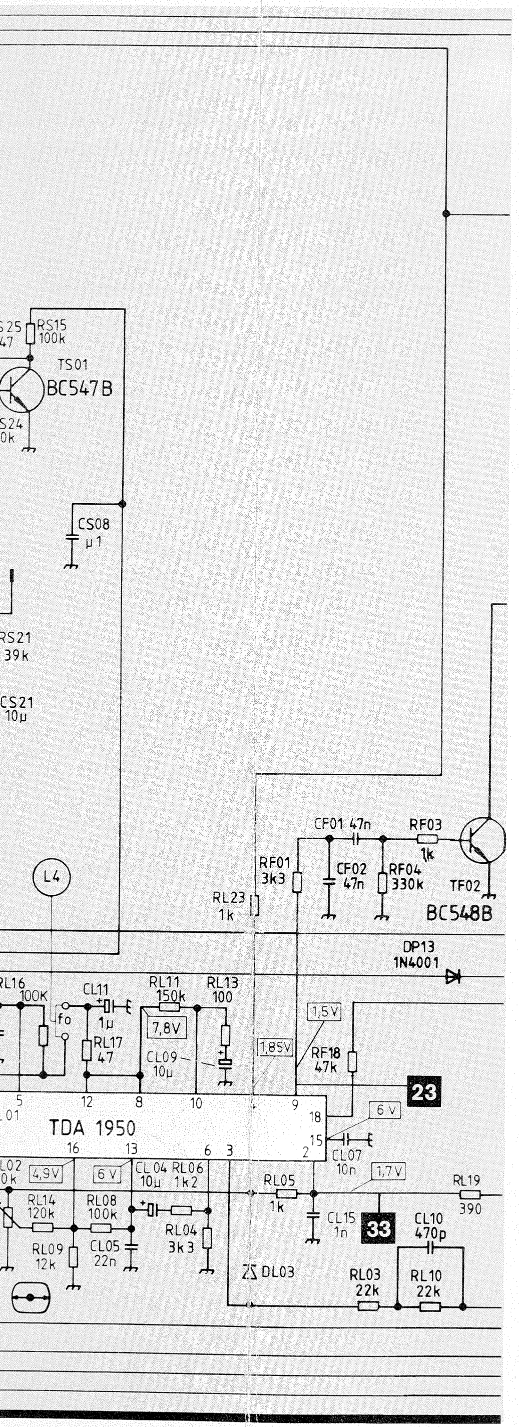
NORDMENDE

*nicht in allen Geräten vorhanden
not fitted to all models
non esistente in ogni modello

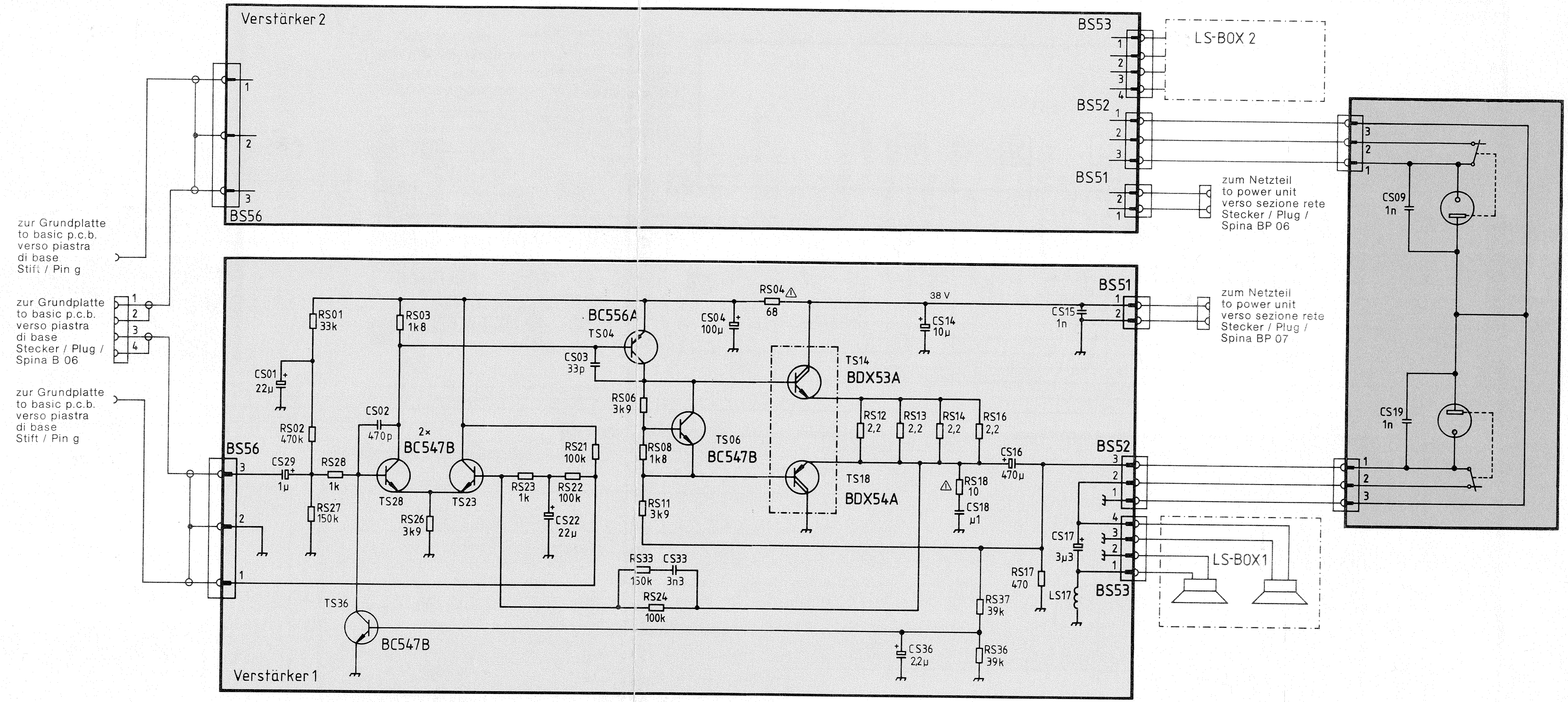
Chassisvariante für 2 x 12 W NF-Endstufen / Blockschaltbild Ton-ZF/Stereo-Modul
Chassis variation with 2 x 12 W AF-output stages / Block diagramm sound IF stereo module
Variante di telaio per 2 x 12 W stadi finali BF / Circuit a blocci modulo FI tono stereo

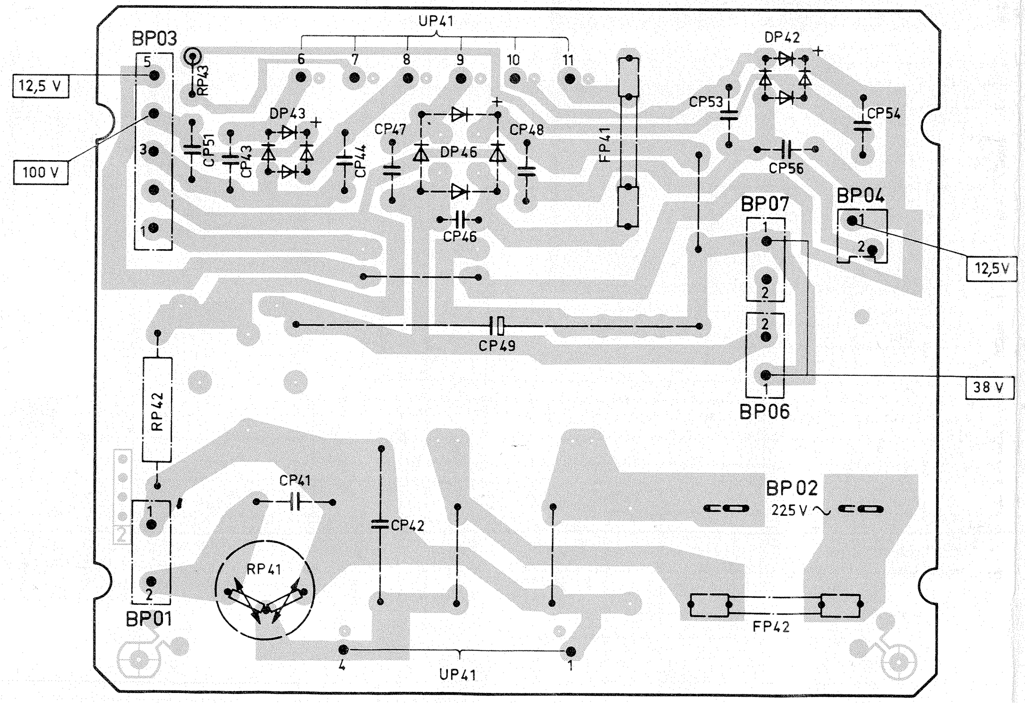


Ton-ZF/
Stereo-Modul
Sound IF
Stereo module
Modulo FI
tono stereo
592.673
BS10
BS41
BS42
BS40
BS30
Zf-Eingang
Umschaltung Kopfhörerausgang seriell T1-T2 oder Mo-St
Umschaltung Hauptverstärker seriell T1-T2 oder Mo-St
5,74MHz
5,47kHz
IS05
MC1458
TS05
TS43
Ex Ps
H-LEDein L-LEDaus
Mo
St T1
St T2
Stereoempf., manuell auf Mono gesch.
H = Expand / Pseudo-Stereo
L = normal
IS01 TDA3800
117Hz
274Hz
CS12 - H bei Stod 2Ton, L bei Mono
Dekodierung LED-Anzeige TS27,29,44-47
H H Mo ps a
H L Mo norm b
L H St exp c
L L St norm d
Mo St T1 T2
H L L H
H L H L
IS02 TBA120UB
5,5 MHz
5,5MHz
IS04 MC14052B
TS52
150 Hz
4,5 kHz
IS06
MC3303P
IS07 MC14052B
IS08 TA 7630P
Nf R
Nf L
BS31
Nf const 1-L 4-R
Nf geregelt 3-L 5-R
MC1458
IS03
Muting
Nfint/ext
NfL
NfR
Scart
BS10/6
CS26 1n
B03
CP24 10n
CP28 10n
+5 7 V
Ratio
+2 13 V
FA
RP30 1k
Muting Ein / Standby
CP27 10n
B06
Entmagnetisierung
Degaussing
Smagnetizz
592.660
BP01
UP41
BP07
BP06
BP03
PP41
CP44
CP43 4n7
DP43
B125C1500
CP51 4n7
FP41 T315A
CP47 4n7
38 V
CP48 4n7
CP46 4n7
DP46
CP49 3300µ
S4 VB10
CP41 68n
CP42 µ1
Netz
Mains
Rete
FP42 T1,6A
BP02
RP42 10M
RP43 0,47
CP53 4n7
DP42
B80 C1500
CP54 4n7
CP56 4n7
BP04
B12
B10
B11
FP02 T1,6A
CP11 470µ
LP01
TP01 BU806
100 V
+B
LP11 DP14 LP12 BY297
RP08 1k8
CP23 3n3
DP10 BA157
RL53 100NB
140V +1
Netzteil
Power unit
Sezione rete
30 mV
RP16 180
RP02 220
TP02 BC558A
RP01 12k
TP06 BC548A
CP12 µ1
TP04 BC548B
RP03 0,27
RP12 4k7
RP04 82
RP07 150k
DP17
DP15 1N4001
DP21
DP24
DP03
3× 1N4001
12,5 V
DP42 RP05 470 DP43
CP14 100µ
RP11 390k
PP01 10k
RP23 2k7
TP05 BC558A
RP09 15k
RP06 150k
RP25 1k8
DP09
11,7 V
DP12
DP20 ZPD5,6
DP19
CP10 22µ
12,4 V
RP26 330
12,5 V +6
TP21 BC328-40
RP21 1k5
RP24 220
CP21 220µ
TP18 BC558B
RP17 15
DP18 ZPD24
RL02 470
RP27 10NB
12 V +6a
CL06 1000µ
RL01 5k6
13 V +2
LL05
CL01 100p
PL01 10k
RS20 1k
CS25 µ47
RS15 100k
TS01 BC547B
RS14 120k
RS24 10k
CS08 µ1
RS11 39k
RS21 39k
CS11 10µ
CS21 10µ
RS10 1k
RL15 4k7
RL12 8k2
DL01
RL16 100K
CL08 µ22
CL11 1µ
RL17 47
RL11 150k
RL13 100
7,8V
CL09 10µ
1,85V
IL01 TDA 1950
PL02 10k
RL07 150k
CL03 µ1
RL14 120k
RL09 12k
RL08 100k
CL05 22n
CL04 10µ
RL06 1k2
RL04 3k3
DL03
RL05 1k
CL15 1n
CL07 10n
1,7V
1,5V
6V
RF18 47k
RL03 22k
RL10 22k
CL10 470p
RL19 390
CF01 47n
RF03 1k
RF01 3k3
CF02 47n
RF04 330k
TF02 BC548B
RL23 1k
DP13 1N4001
L4
12,5 V
100 V
BP03
RP43
CP51
RP42
BP01
zur Grundplatte
to basic p.c.b.
verso piastra di base
Stift / Pin g
zur Grundplatte
to basic p.c.b.
verso piastra di base
Stecker / Plug / Spina B 06
zur Grundplatte
to basic p.c.b.
verso piastra di base
Stift / Pin g
1
2
3
4
5
6
23
33

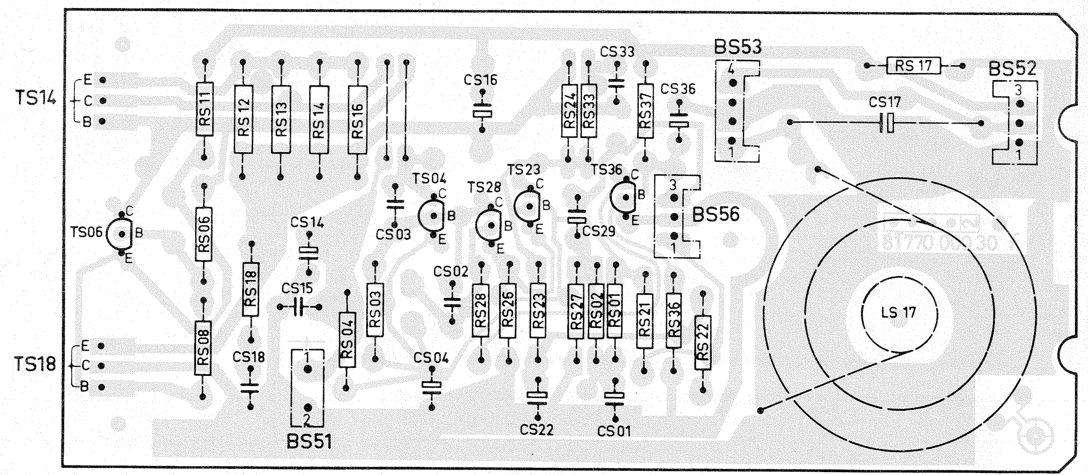

RS15 100k
TS01
BC547B
CS08 µ1
RS21 39k
CS21 10µ
L4
CF01 47n
RF03 1k
RF01 3k3
CF02 47n
RF04 330k
TF02
BC548B
RL23 1k
DP13 1N4001
CL11 1µ
RL11 150k
RL13 100
RL17 47
CL09 10µ
RF18 47k
TDA 1950
23
CL07 10n
RL05 1k
CL15 1n
33
CL10 470p
RL19 390
RL08 100k
RL14 120k
RL09 12k
CL05 22n
RL04 3k3
RL03 22k
RL10 22k
DL03

NF-Endstufen
AF-Output stages
Stadi finali BF **592.664**


Verstärker 2
BS56
BS53
BS52
BS51
LS-BOX 2
zur Grundplatte
to basic p.c.b.
verso piastra di base
Stift / Pin g
zur Grundplatte
to basic p.c.b.
verso piastra di base
Stecker / Plug / Spina B 06
zum Netzteil
to power unit
verso sezione rete
Stecker / Plug / Spina BP 06
zum Netzteil
to power unit
verso sezione rete
Stecker / Plug / Spina BP 07
CS09 1n
CS19 1n
RS01 33k
RS03 1k8
BC556A
TS04
RS04 68
38 V
CS04 100µ
CS14 10µ
CS15 1n
CS03 33p
CS01 22µ
TS14
BDX53A
RS06 3k9
RS12 2,2
RS13 2,2
RS14 2,2
RS16 2,2
CS02 470p
RS02 470k
2× BC547B
RS21 100k
TS06
BC547B
RS08 1k8
CS16 470µ
CS29 1µ
RS28 1k
RS27 150k
TS28
TS23
RS26 3k9
RS23 1k
RS22 100k
CS22 22µ
TS18
BDX54A
RS18 10
CS18 µ1
RS11 3k9
CS17 3µ3
RS33 150k
CS33 3n3
RS24 100k
RS17 470
LS17
LS-BOX1
TS36
BC547B
RS37 39k
CS36 22µ
RS36 39k
Verstärker 1


BP03
UP41
12,5 V
100 V
RP43
DP42
DP43
CP51
CP43
CP44
CP47
DP46
CP48
FP41
CP53
CP54
CP56
CP46
BP07
BP04
12,5V
CP49
38 V
BP06
RP42
CP41
CP42
BP02
225 V ∼
RP41
BP01
FP42

Leiterplatte Netzteil
P.C.B. Power supply
Piastra di rete
592.660
Lötseite – *Soldered side* – Lato saldature


TS14
TS18
TS06
RS11
RS12
RS13
RS14
RS16
CS16
RS24
RS33
CS33
RS37
CS36
BS53
RS 17
BS52
CS17
TS04
TS28
TS23
TS36
BS56
RS06
RS18
CS14
CS03
CS02
CS29
CS15
RS08
CS18
RS04
RS03
RS28
RS26
RS23
RS27
RS02
RS01
RS21
RS36
RS22
CS04
CS22
CS01
BS51
LS 17

Leiterplatte NF-Endstufe
P.C.B. AF-Output stage
Piastra stadio finale BF
592.664
Lötseite – *Soldered side* – Lato saldature

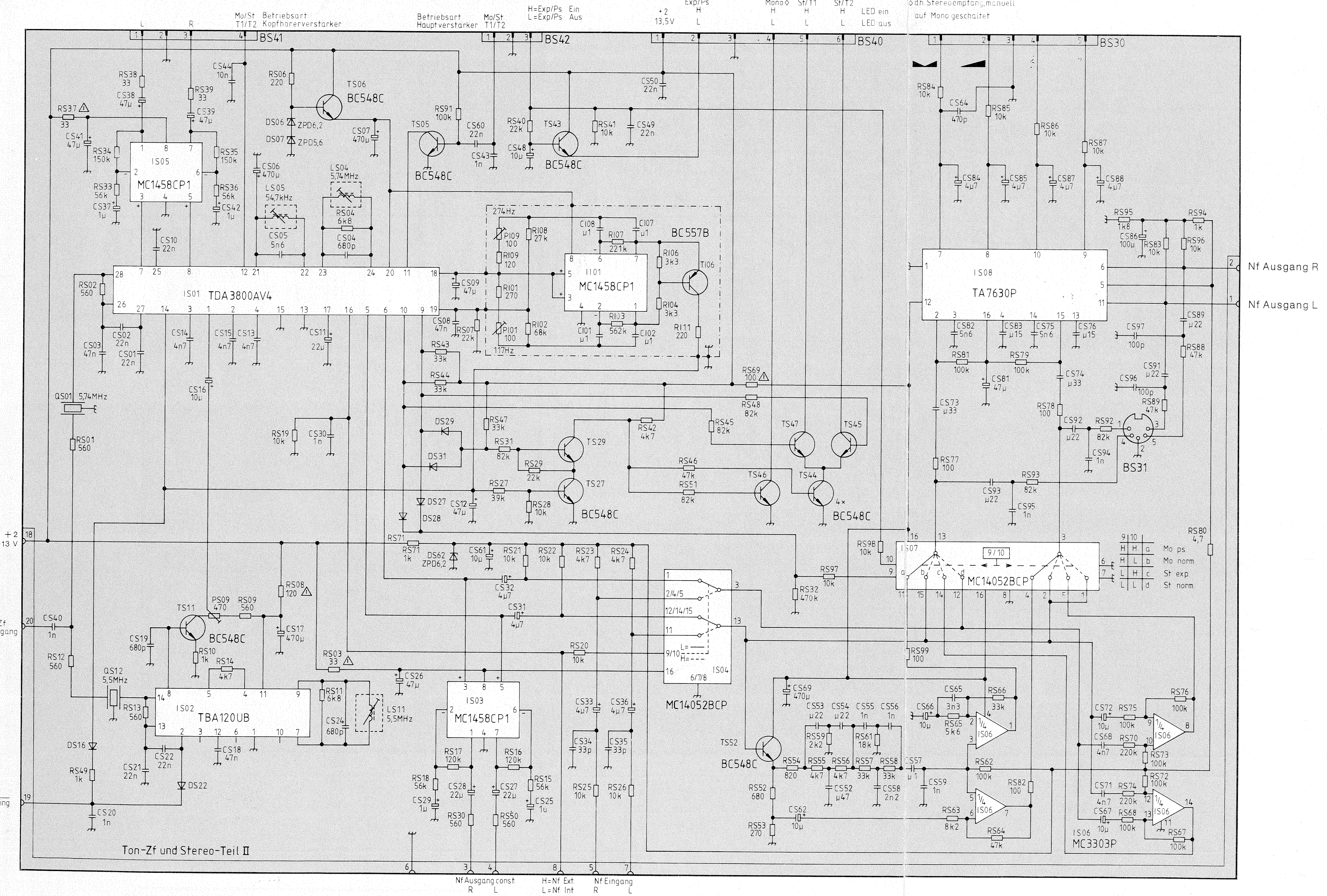
Ton-ZF/Stereo-Modul
Sound IF Stereo module 592.673
Modulo FI tono stereo

zur Kopfhörerbuchse
to headphone socket
verso presa per cuffia

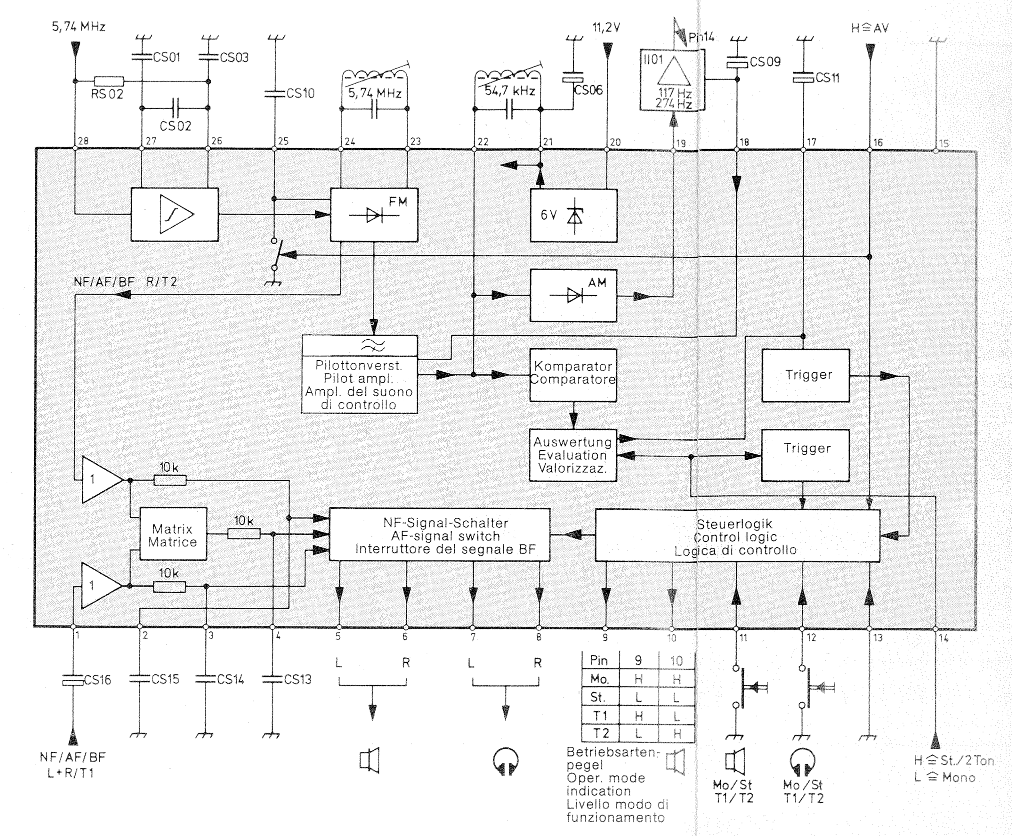
zur Systemplatte
to system board
verso piastra commutazione segnali di comando
Stecker / plug / spina BS 42

zur Bedienteilplatte
to control unit board
verso piastra elemento di comando

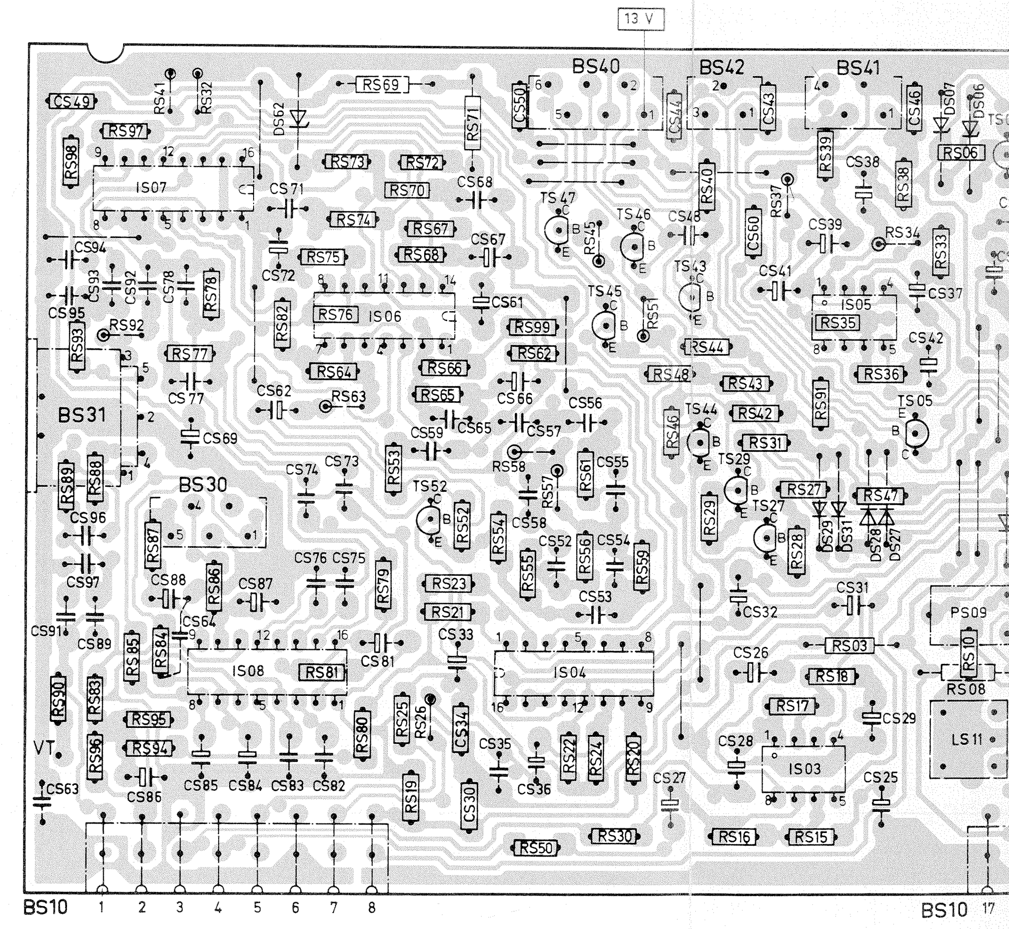
zur Systemplatte
to system board
verso piastra commutazione segnali di comando
Stecker / plug / spina BS 30


BS41
BS42
BS40
BS30
IS01 TDA3800AV4
IS02 TBA120UB
IS03 MC1458CP1
IS04 MC14052BCP
IS05 MC1458CP1
IS06 MC3303P
IS07 MC14052BCP
IS08 TA7630P
I101 MC1458CP1
TS06 BC548C
TS05 BC548C
TS43 BC548C
TS29
TS27 BC548C
TS44 4× BC548C
TS11 BC548C
TS52 BC548C
T106 BC557B
QS01 5,74MHz
QS12 5,5MHz
Nf Ausgang R
Nf Ausgang L
BS31
Ton-Zf und Stereo-Teil II
Nf Ausgang const R L
H=Nf Ext L=Nf Int
Nf Eingang R L

zur Grundplatte, Stecker BS 10
to basic p.c.b., plug BS 10
verso piastra di base, spina BS 10

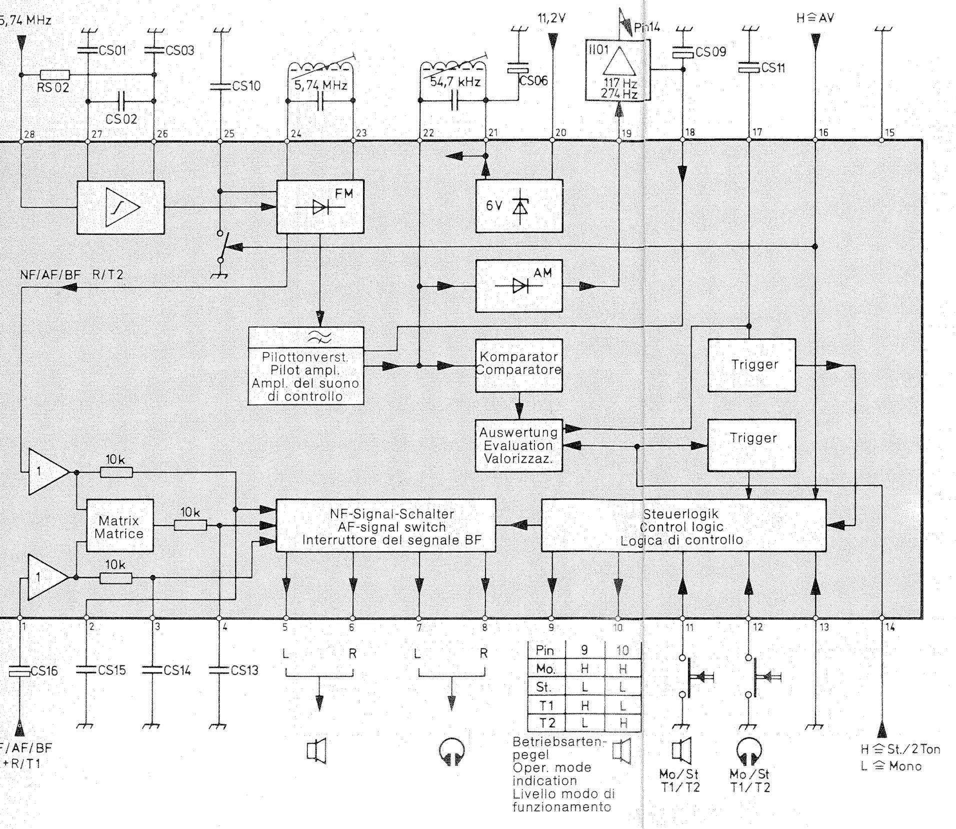

5,74 MHz
11,2V
H≙AV
FM
AM
6V
NF/AF/BF R/T2
Pilottonverst.
Pilot ampl.
Ampl. del suono di controllo
Komparator
Comparatore
Auswertung
Evaluation
Valorizzaz.
Trigger
Trigger
Matrix
Matrice
NF-Signal-Schalter
AF-signal switch
Interruttore del segnale BF
Steuerlogik
Control logic
Logica di controllo
NF/AF/BF L+R/T1
Betriebsarten-pegel
Oper. mode indication
Livello modo di funzionamento
Mo/St T1/T2
H≙St./2Ton
L≙Mono

Pin	9	10
Mo.	H	H
St.	L	L
T1	H	L
T2	L	H

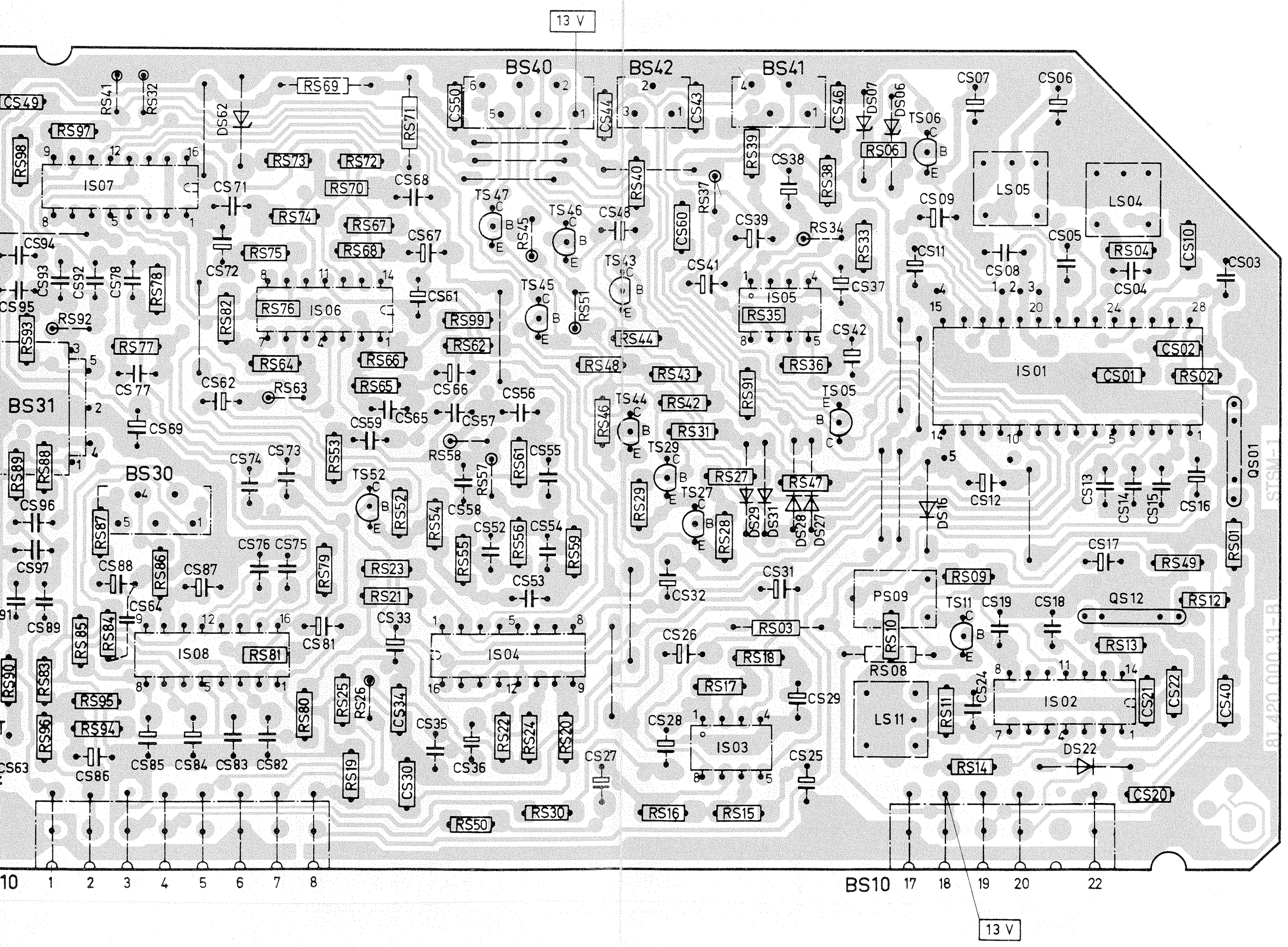

13 V
BS40
BS42
BS41
BS31
BS30
IS07
IS06
IS05
IS08
IS04
IS03
BS10
1
2
3
4
5
6
7
8
BS10 17

Ton-ZF/Stereo-Modul
Sound IF Stereo module
Modulo FI tono stereo
592 673

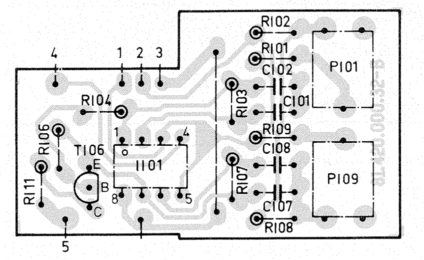
Lötseite – *Soldered side* – Lato saldature


5,74 MHz
11,2V
H ≙ AV
CS01
CS03
RS02
CS02
CS10
5,74 MHz
54,7 kHz
CS06
II01
117 Hz
274 Hz
Pin14
CS09
CS11
FM
6V
AM
NF/AF/BF R/T2
Pilottonverst.
Pilot ampl.
Ampl. del suono di controllo
Komparator
Comparatore
Trigger
Auswertung
Evaluation
Valorizzaz.
Trigger
10k
Matrix
Matrice
10k
10k
NF-Signal-Schalter
AF-signal switch
Interruttore del segnale BF
Steuerlogik
Control logic
Logica di controllo
CS16
CS15
CS14
CS13
L
R
L
R
Pin 9 10
Mo. H H
St. L L
T1 H L
T2 L H
Betriebsartenpegel
Oper. mode indication
Livello modo di funzionamento
Mo/St T1/T2
Mo/St T1/T2
H ≙ St./2 Ton
L ≙ Mono
F/AF/BF
+R/T1

IS 01
TDA 3800 AV 4

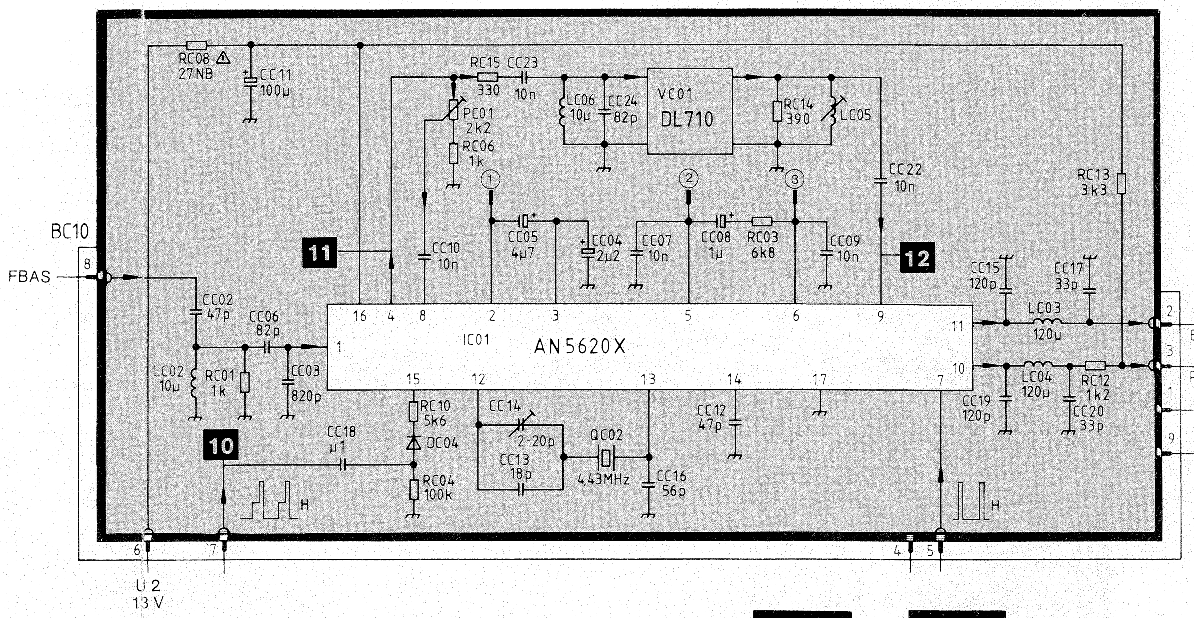

13 V
BS40
BS42
BS41
IS07
IS06
IS05
IS01
IS08
IS04
IS03
IS02
BS31
BS30
TS47
TS46
TS45
TS43
TS44
TS29
TS27
TS52
TS05
TS06
TS11
LS05
LS04
LS11
PS09
QS12
QS01
DS22
BS10
13 V

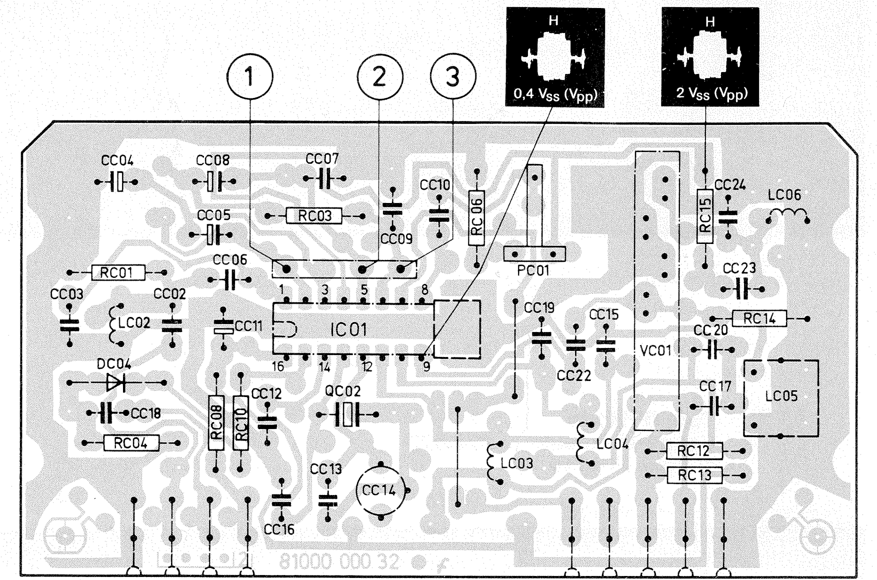
Ton-ZF/Stereo-Modul
Sound IF Stereo module
Modulo FI tono stereo
592.673
Lötseite – *Soldered side* – Lato saldature


RI02
RI01
CI02
CI01
PI01
RI04
RI03
RI09
CI08
RI06
TI06
II01
RI07
PI09
RI11
CI07
RI08

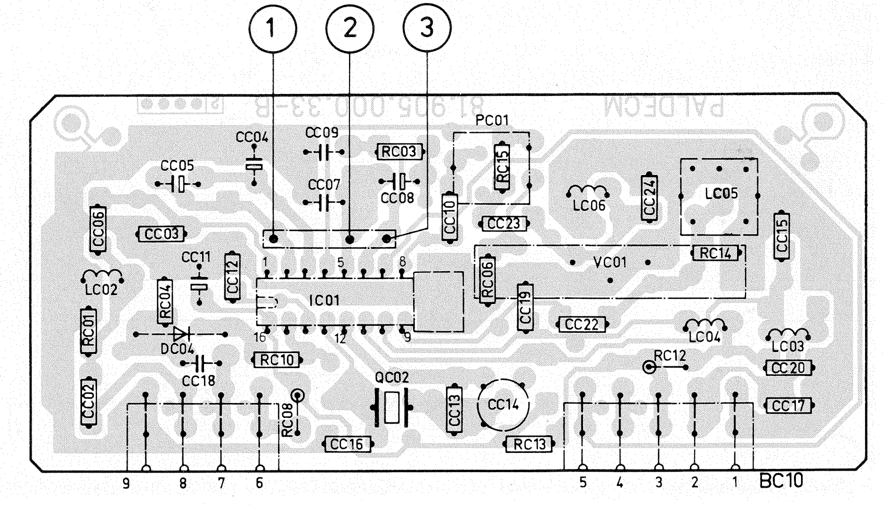
Zusatzplatte
Suppl. module
Modulo suppl.
592.674
Lötseite – *Soldered side* – Lato saldature

PAL-Decoder
Decoder PAL 592.651/675


RC08 27NB
CC11 100μ
RC15 330
CC23 10n
PC01 2k2
RC06 1k
LC06 10μ
CC24 82p
VC01 DL710
RC14 390
LC05
CC22 10n
RC13 3k3
BC10
FBAS
11
12
CC10 10n
CC05 4μ7
CC04 2μ2
CC07 10n
CC08 1μ
RC03 6k8
CC09 10n
CC15 120p
CC17 33p
LC03 120μ
CC02 47p
CC06 82p
IC01
AN5620X
B-Y
R-Y
LC02 10μ
RC01 1k
CC03 820p
RC10 5k6
DC04
CC14 2-20p
CC13 18p
QC02 4,43MHz
CC12 47p
CC19 120p
LC04 120μ
RC12 1k2
CC20 33p
10
CC18 μ1
RC04 100k
CC16 56p
H
H
U2 13 V


1
2
3
H
0,4 Vss (Vpp)
H
2 Vss (Vpp)
CC04
CC08
CC07
CC10
RC06
RC15
CC24
LC06
CC05
RC03
CC09
PC01
CC06
RC01
CC03
CC02
LC02
CC11
IC01
CC19
CC15
CC23
RC14
CC20
VC01
CC22
DC04
CC12
QC02
CC17
LC05
CC18
RC08
RC10
RC04
CC13
CC14
LC03
LC04
RC12
RC13
CC16
81000 000 32
9 8 7 6 5 4 3 2 1

PAL-Decoder
Decoder PAL
592.651
Lötseite – *Soldered side* – Lato saldature

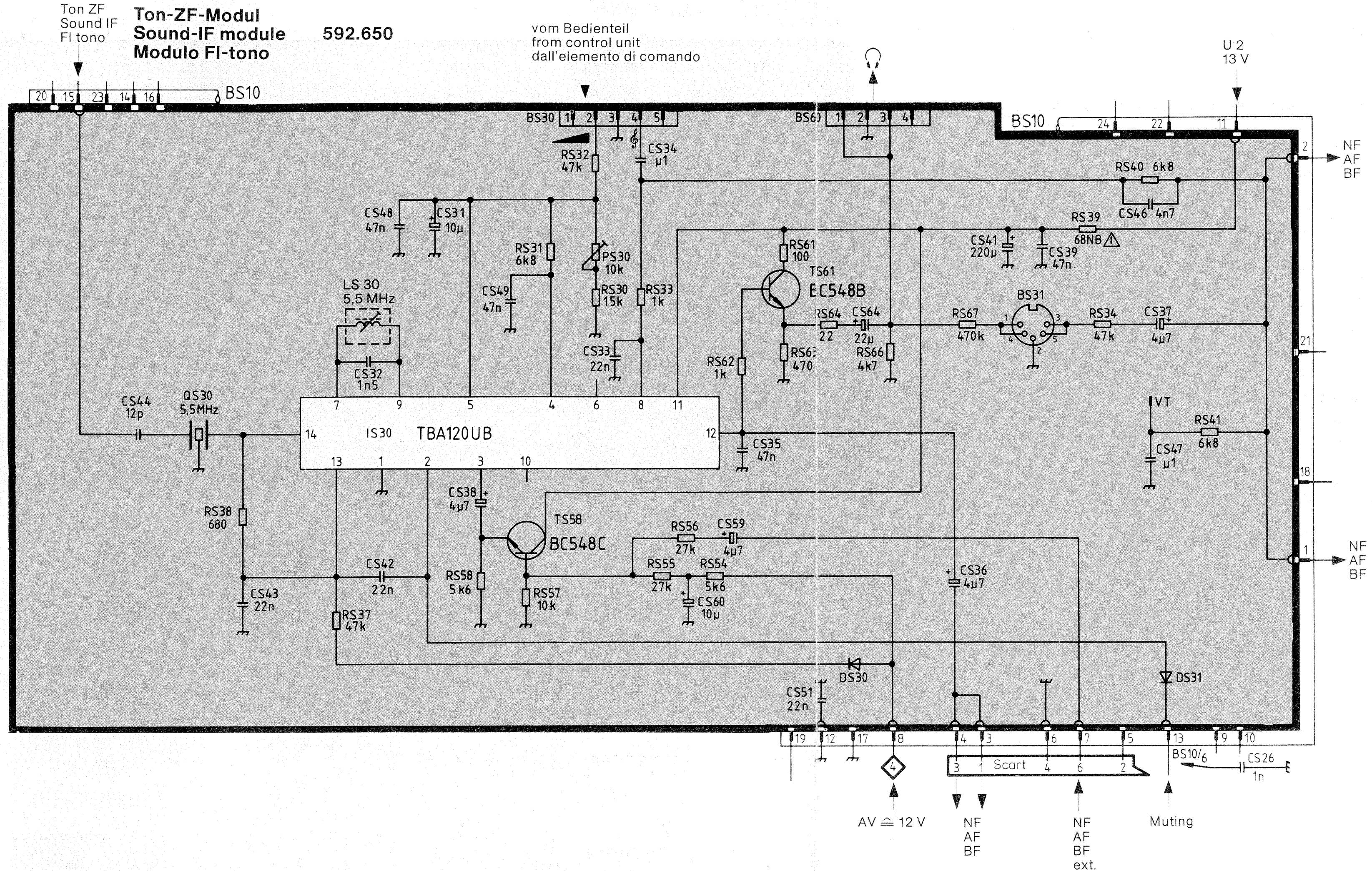

1
2
3
PC01
CC04
CC09
RC03
RC15
CC05
CC07
CC08
LC06
CC24
LC05
CC06
CC03
CC10
CC23
CC15
CC11
CC12
RC06
VC01
RC14
LC02
RC04
IC01
CC19
RC01
DC04
RC10
CC22
LC04
LC03
RC12
CC20
CC18
QC02
CC02
RC08
CC13
CC14
CC16
RC13
CC17
9 8 7 6 5 4 3 2 1 BC10

PAL-Decoder
Decoder PAL (MELF)
592.675
Lötseite – *Soldered side* – Lato saldature

Ton ZF
Sound IF
FI tono

Ton-ZF-Modul
Sound-IF module
Modulo FI-tono

592.650

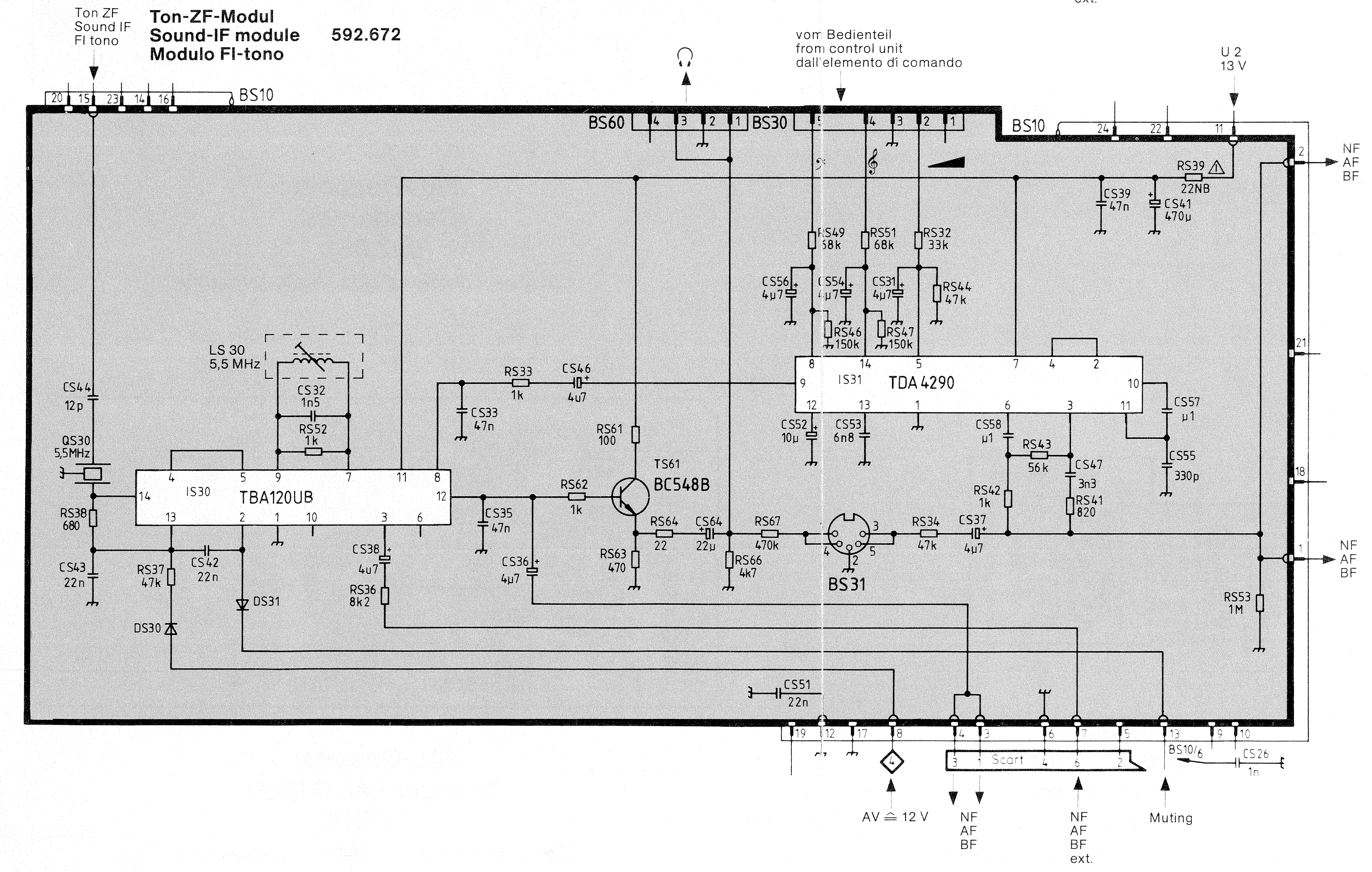


vom Bedienteil
from control unit
dall'elemento di comando
U 2
13 V
BS10
BS30
BS60
NF
AF
BF
TBA120UB
IS30
BC548B
TS61
BC548C
TS58
LS 30
5,5 MHz
QS30
5,5MHz
BS31
DS30
DS31
Scart
AV ≙ 12 V
NF
AF
BF
ext.
Muting

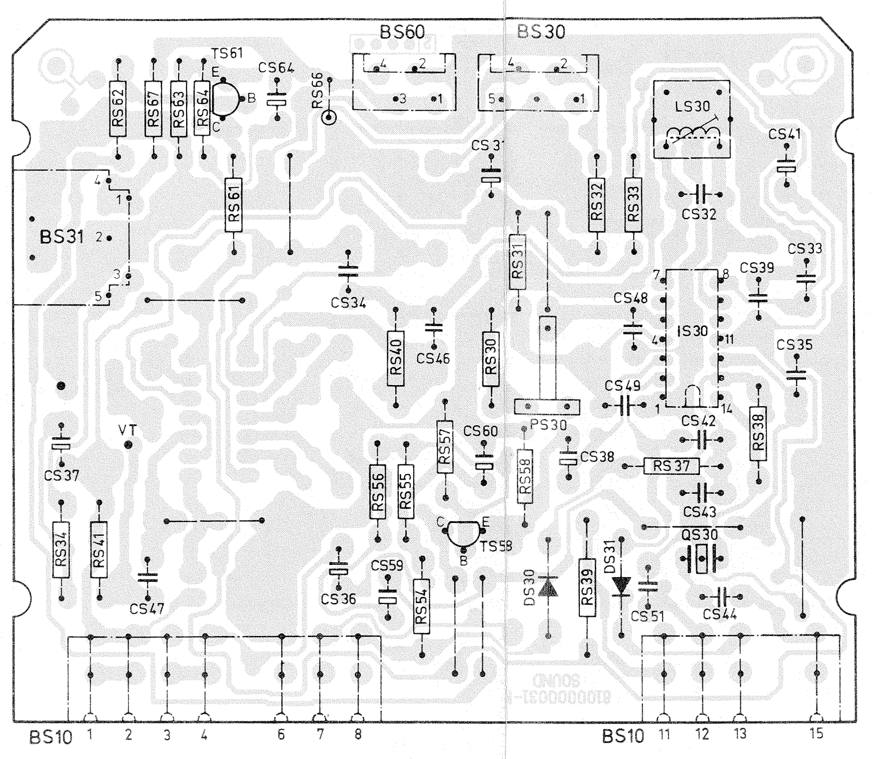
Ton ZF
Sound IF
FI tono

Ton-ZF-Modul
Sound-IF module
Modulo FI-tono

592.672



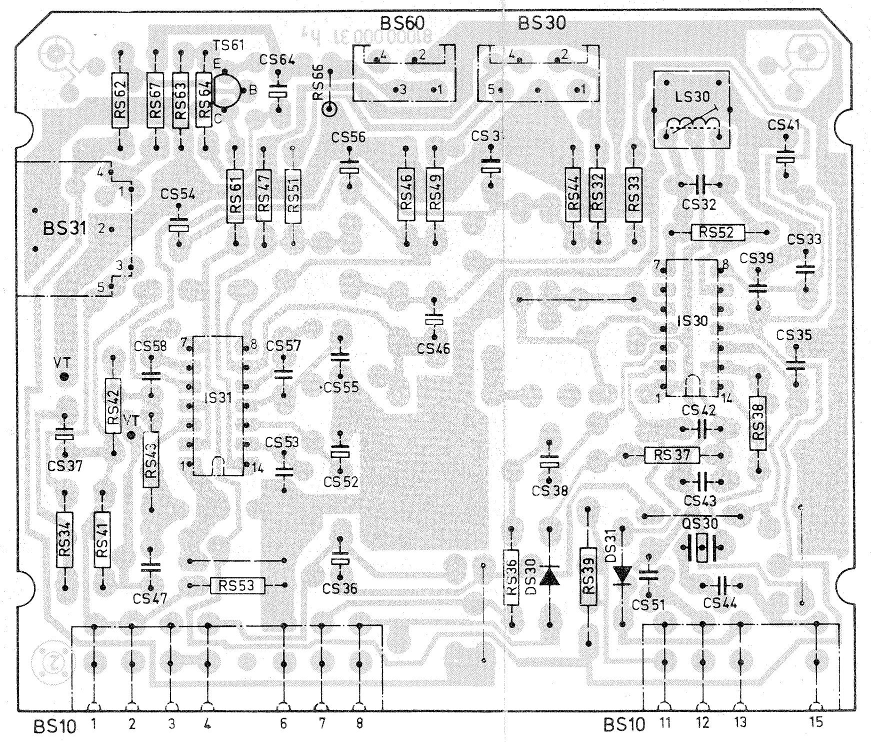
vom Bedienteil
from control unit
dall'elemento di comando
U 2
13 V
BS10
BS60
BS30
NF
AF
BF
TBA120UB
IS30
TDA 4290
IS31
BC548B
TS61
LS 30
5,5 MHz
QS30
5,5MHz
BS31
DS30
DS31
Scart
AV ≙ 12 V
NF
AF
BF
ext.
Muting



BS60
BS30
BS31
BS10
IS30
TS61
TS58
LS30
QS30
VT

Ton-ZF Modul
Sound-IF module
Modulo FI-tono
592.650

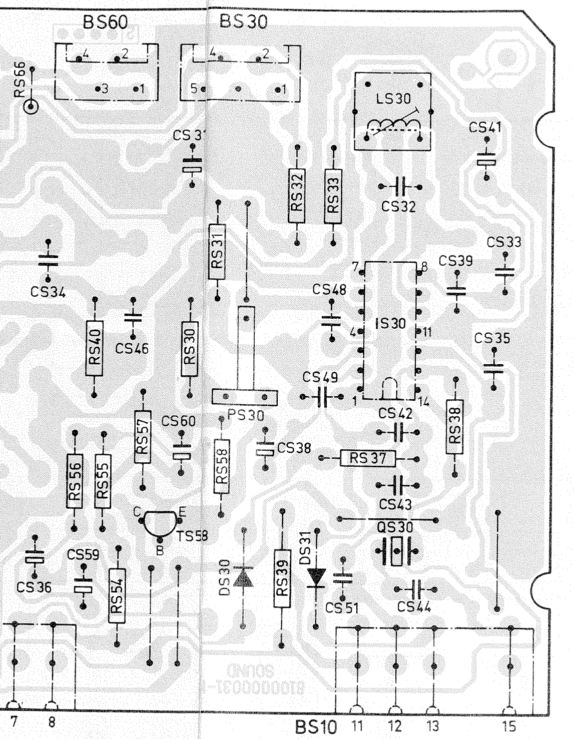
Lötseite – *Soldered side* – Lato saldature



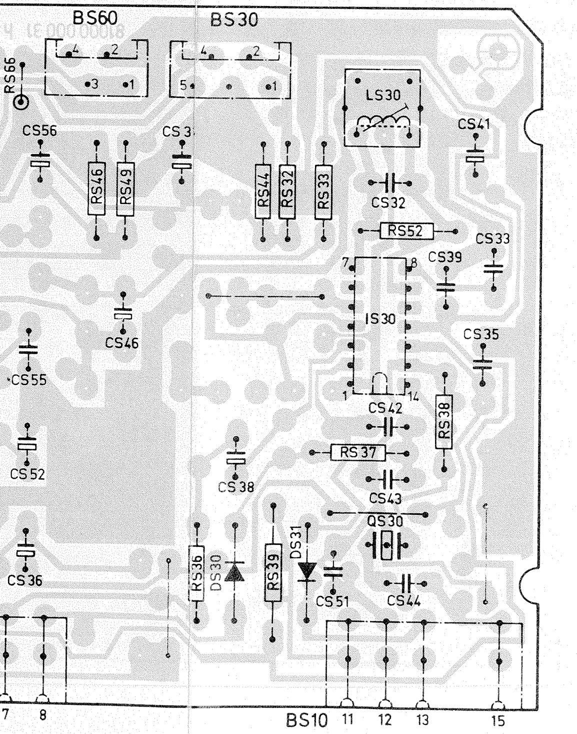
BS60
BS30
BS31
BS10
IS30
IS31
TS61
LS30
QS30
VT

Ton-ZF Modul
Sound-IF module
Modulo FI-tono
592.672

Lötseite – *Soldered side* – Lato saldature

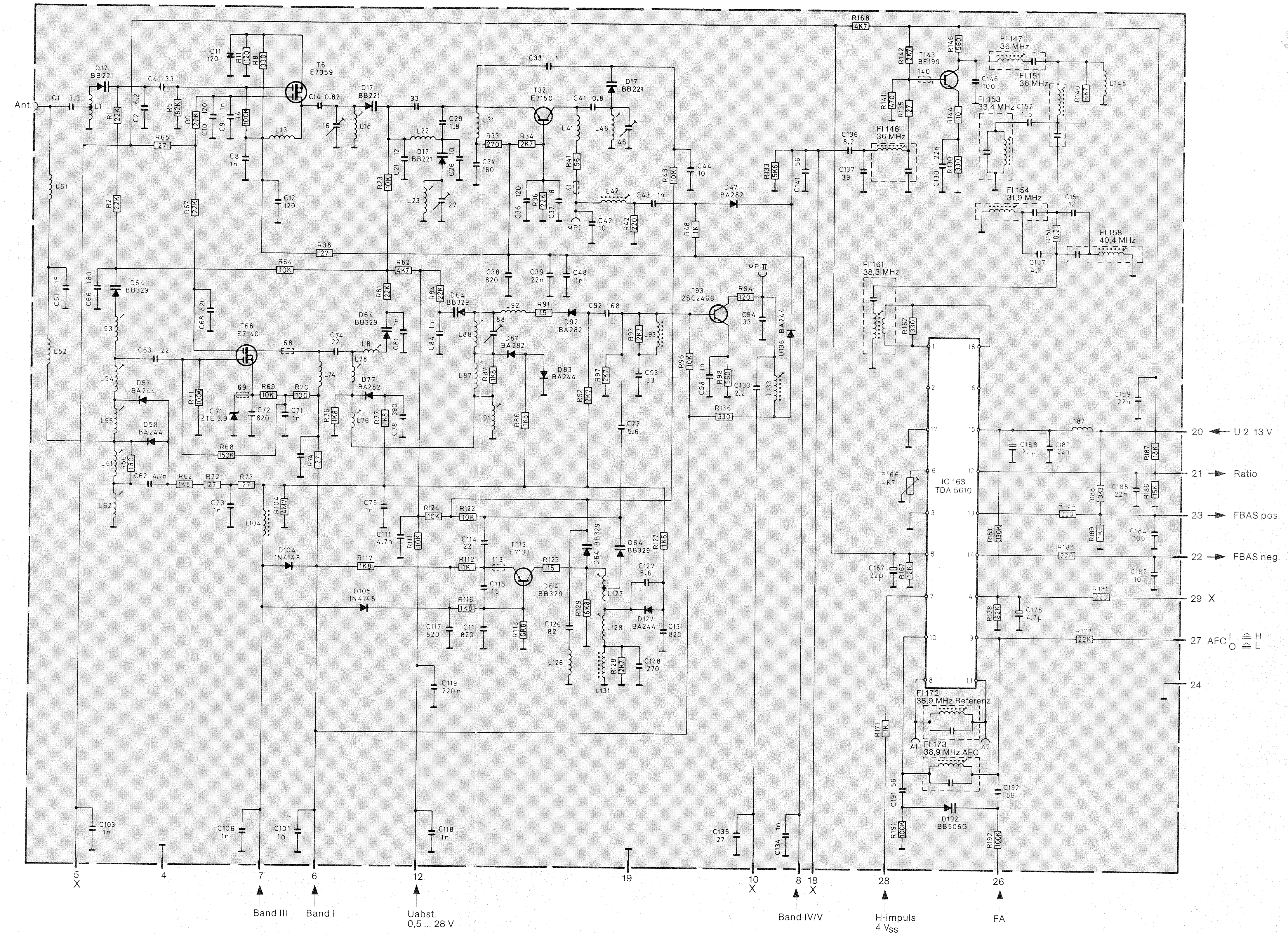

BS60
BS30
RS66
LS30
CS41
CS34
CS46
CS48
IS30
CS39
CS33
CS35
CS49
CS42
CS60
PS30
CS38
RS37
CS43
QS30
TS58
DS30
DS31
CS51
CS44
CS59
CS36
BS10
7
8
11
12
13
15

Ton-ZF Modul
ound-IF module
Modulo FI-tono
592.650
Soldered side – Lato saldature


BS60
BS30
RS66
LS30
CS56
CS41
RS46
RS49
RS44
RS32
RS33
CS32
RS52
CS33
IS30
CS39
CS46
CS35
CS55
CS42
RS38
CS52
CS38
RS37
CS43
QS30
DS30
DS31
RS39
CS51
CS44
CS36
BS10
7
8
11
12
13
15

Ton-ZF Modul
ound-IF module
odulo FI-tono
592.672
oldered side – Lato saldature

HF-Block
RF block
Unità AF **MTS 2000** **563.794**

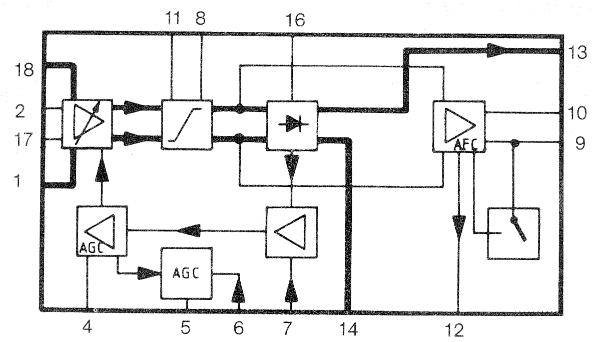

Ant.
D17 BB221
T6 E7359
T32 E7150
D17 BB221
T143 BF199
Fl 147 36 MHz
Fl 151 36 MHz
Fl 153 33,4 MHz
Fl 146 36 MHz
Fl 154 31,9 MHz
Fl 158 40,4 MHz
Fl 161 38,3 MHz
D47 BA282
MP I
MP II
D64 BB329
T68 E7140
IC71 ZTE 3,9
D57 BA244
D58 BA244
D77 BA282
D87 BA282
D83 BA244
D92 BA282
T93 2SC2466
D136 BA244
D104 1N4148
D105 1N4148
T113 E7133
D127 BA244
IC 163 TDA 5610
Fl 172 38,9 MHz Referenz
Fl 173 38,9 MHz AFC
D192 BB505G
20 U 2 13 V
21 Ratio
23 FBAS pos.
22 FBAS neg.
29 X
27 AFC I ≙ H O ≙ L
24
5 X
4
7
6
12
19
10 X
8
18 X
28
26
Band III
Band I
Uabst. 0,5 ... 28 V
Band IV/V
H-Impuls 4 Vss
FA

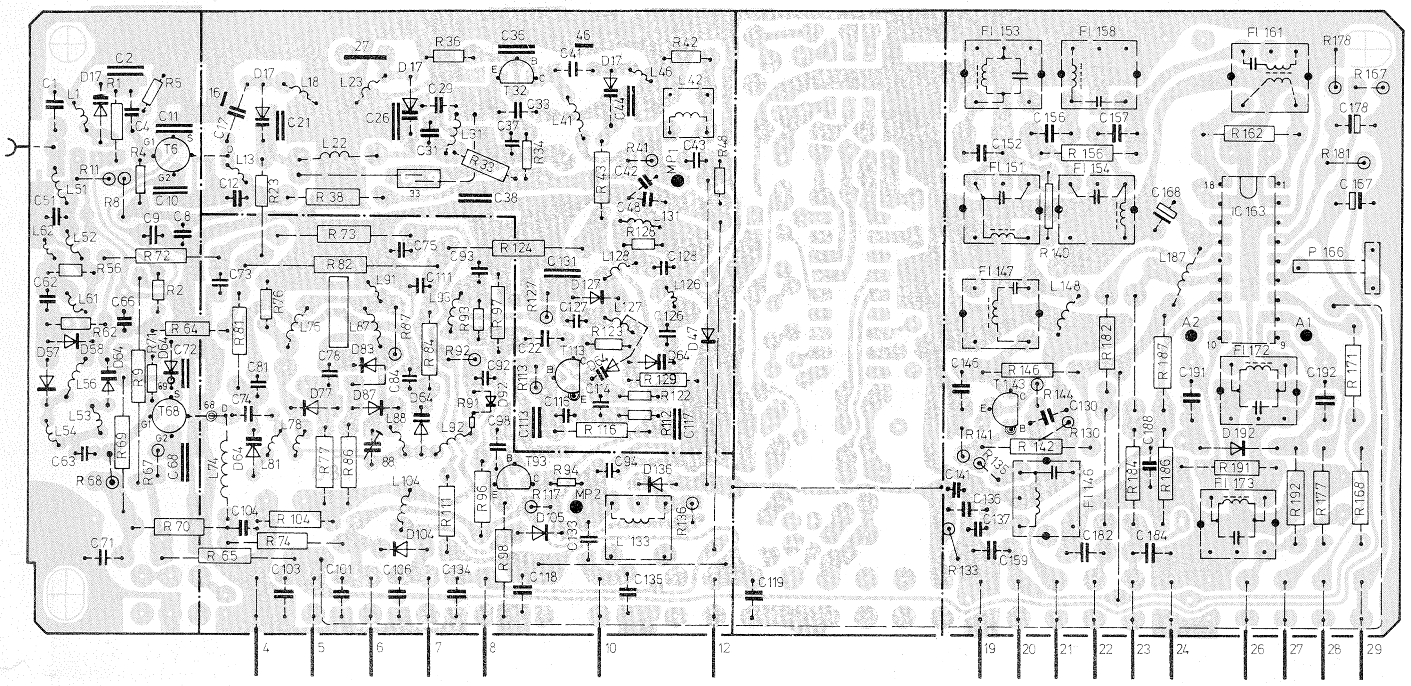
X nicht angeschlossen
X not connected
X non collegate

Bandumschaltung
Band switch
Commutazione di banda

6	7	8	Pin
12 V	−1,5 V	0 V	Band I
0 V	12 V	0 V	Band III
0 V	0 V	2 V	Band IV/V

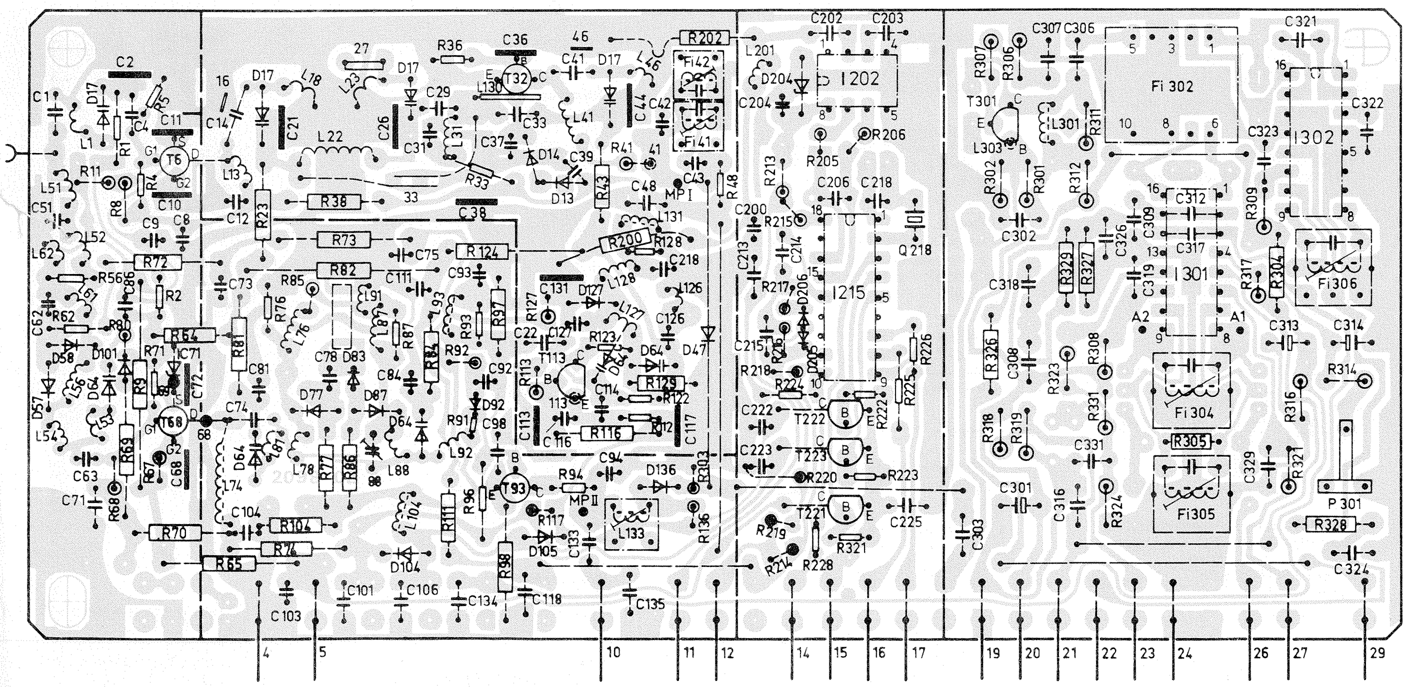
IC 163
TDA 5610


11 8
16
13
18
2
17
1
10
9
AFC
AGC
AGC
4
5
6
7
14
12



Leiterplatte HF-Block
P.C.B. RF block
Piastra Unità AF
MTS 2000
563.794

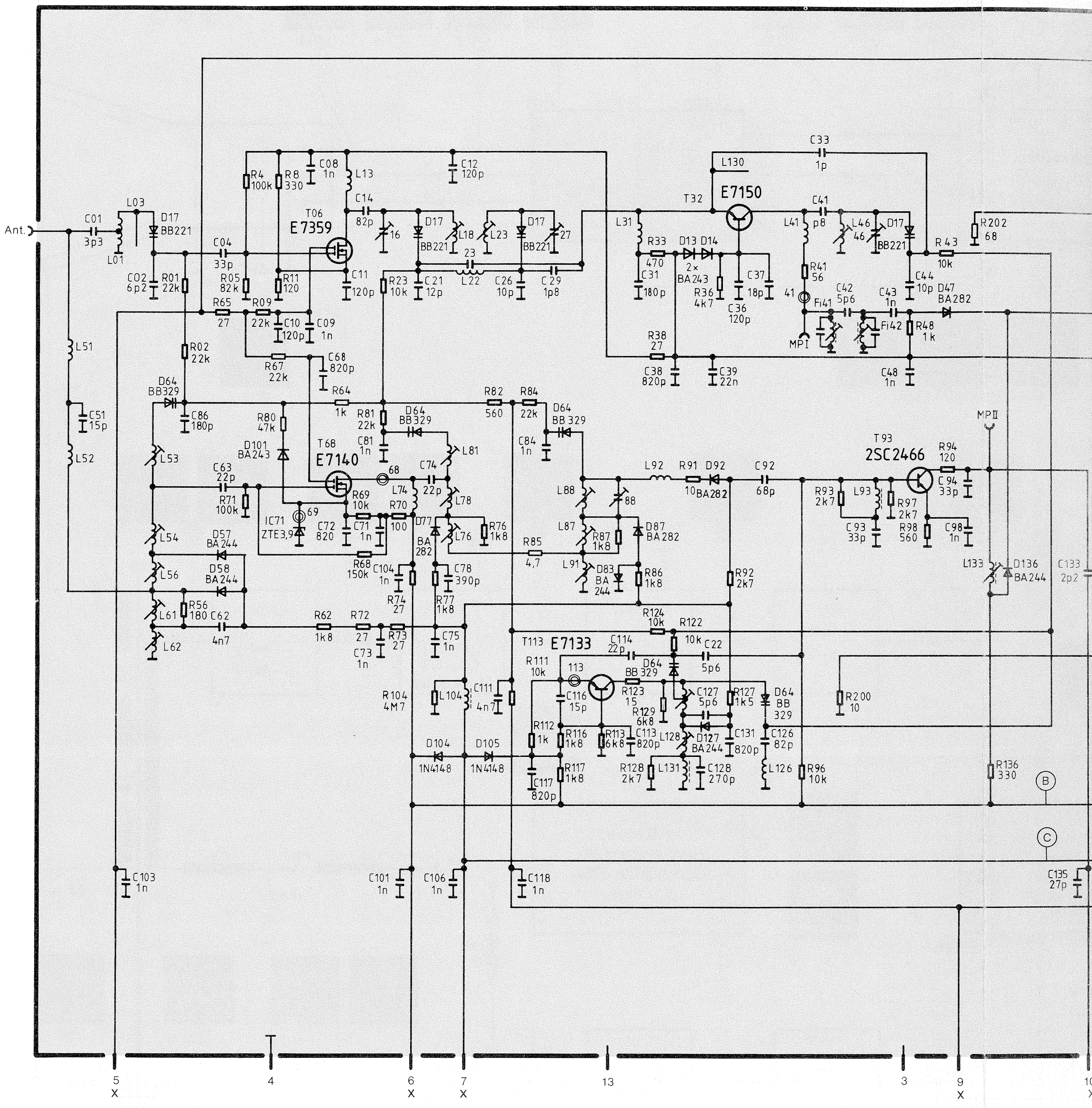
Lötseite – *Soldered side* – Lato saldature



Leiterplatte HF-Block
P.C.B. RF block
Piastra Unità AF
MTS 2020 S
563.796

Lötseite – *Soldered side* – Lato saldature

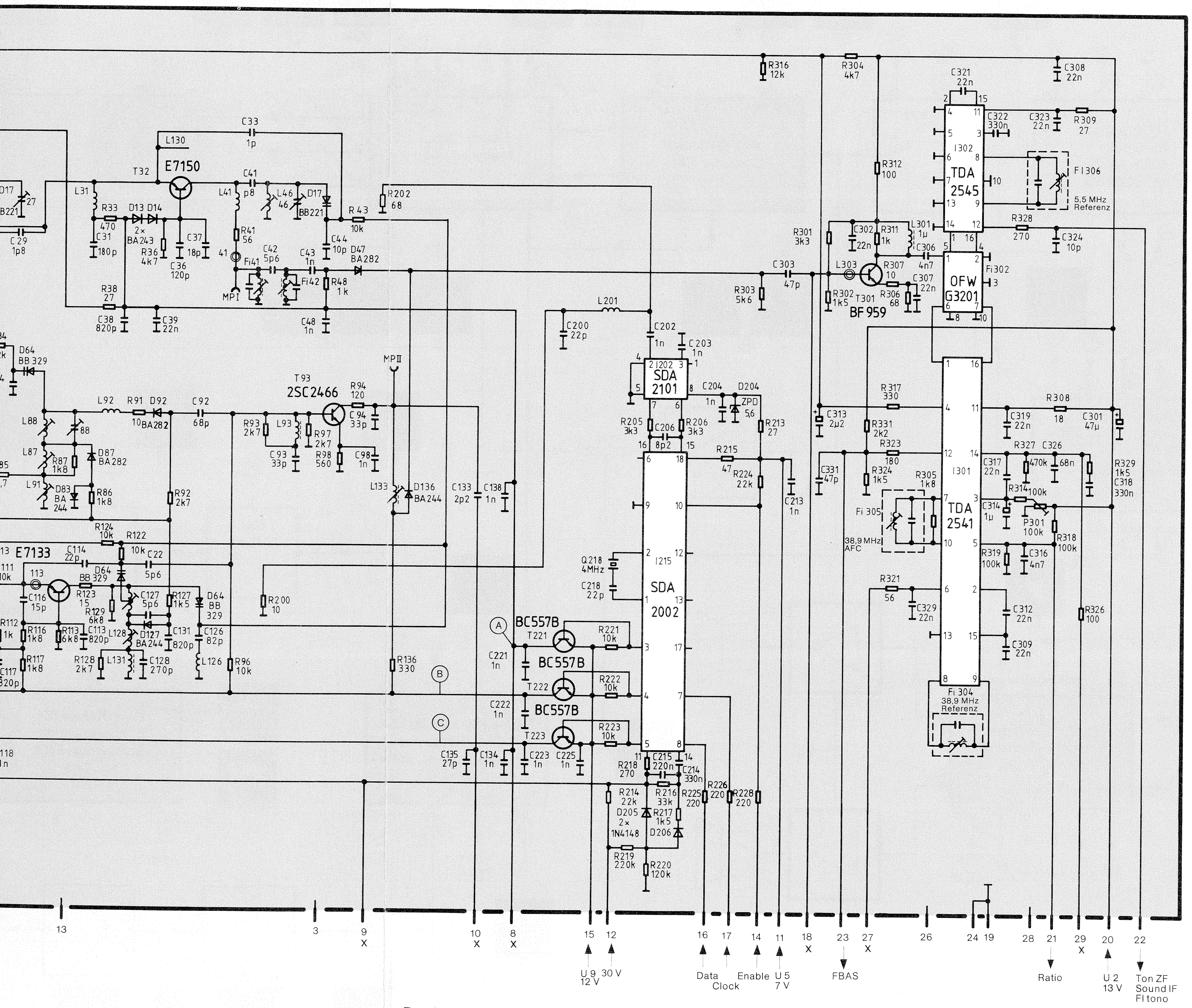
HF-Block
RF block **MTS 2020 S** **563.796**
Unità AF


Ant.
T06 E7359
T32 E7150
T68 E7140
T93 2SC2466
T113 E7133
IC71 ZTE3,9
MPI
MPII
5 X
4
6 X
7 X
13
3
9 X

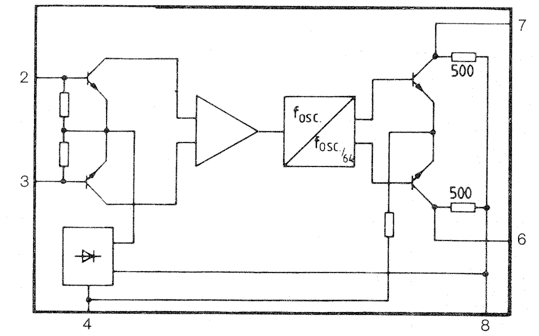
X nicht angeschlossen
X not connected
X non collegate

Bandumsch
Band switc
Commutazi

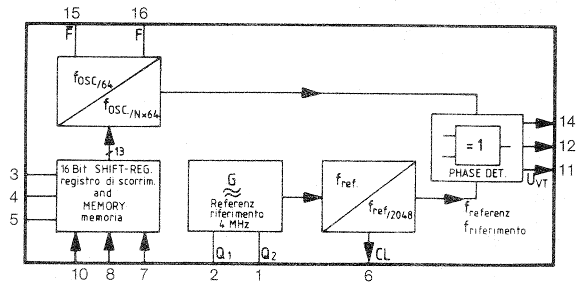
Ⓐ	Ⓑ
L	H
H	H
L	L


E7150
T32
L130
C33 1p
E7133
2SC2466
T93
BF959
T301
SDA 2101
I202
SDA 2002
I215
TDA 2545
I302
TDA 2541
I301
OFW G3201
Fi302
Fi 304 38,9 MHz Referenz
Fi 305
38,9 MHz AFC
FI306 5,5 MHz Referenz
Q218 4MHz
BC557B T221
BC557B T222
BC557B T223
MPI
MPII
13
3
9 x
10 x
8 x
15
12
16
17
14
11
18 x
23
27 x
26
24
19
28
21
29 x
20
22
U 9 12 V
30 V
Data
Clock
Enable
U 5 7 V
FBAS
Ratio
U 2 13 V
Ton ZF Sound IF FI tono

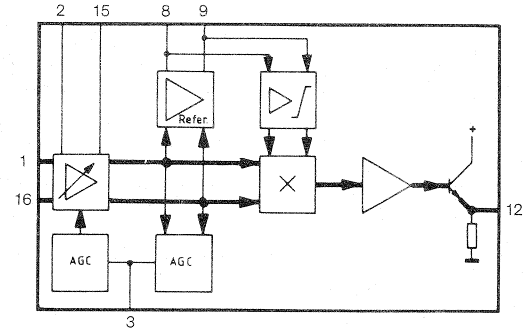
I 202 SDA 2101


2
3
4
6
7
8
500
500
fosc
fosc/64

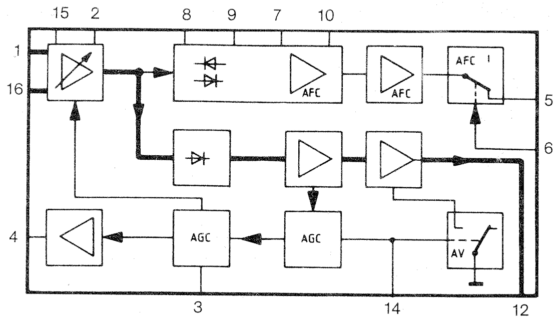
I 215 SDA 2002


15
16
fosc/64
fosc/N×64
13
16 Bit SHIFT-REG. registro di scorrim. and MEMORY memoria
G Referenz riferimento 4 MHz
fref
fref/2048
=1
PHASE DET.
14
12
11
UVT
freferenz
friferimento
3
4
5
10
8
7
2
1
6
Q1
Q2
CL

I 302 TDA 2545

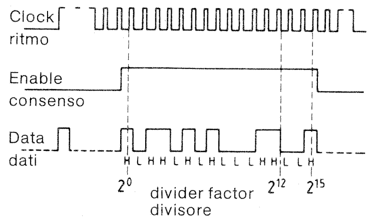

2
15
8
9
Refer
1
16
AGC
AGC
×
+
12
3

I 301 TDA 2541


15
2
8
9
7
10
1
16
AFC
AFC
AFC
5
6
4
AGC
AGC
AV
3
14
12

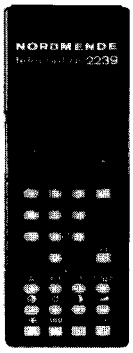
Bandumschaltung
Band switch
Commutazione di banda

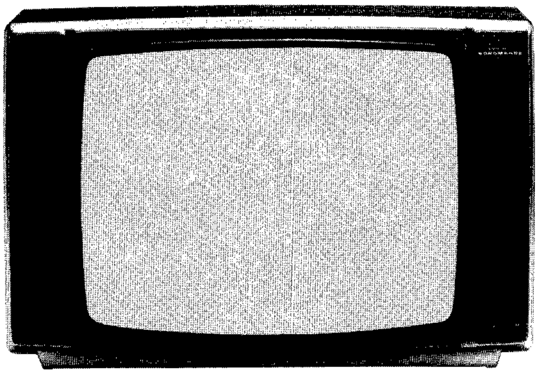
Ⓐ	Ⓑ	Ⓒ	
L	H	L	Band I
H	H	L	Band III
L	L	H	Band IV/V

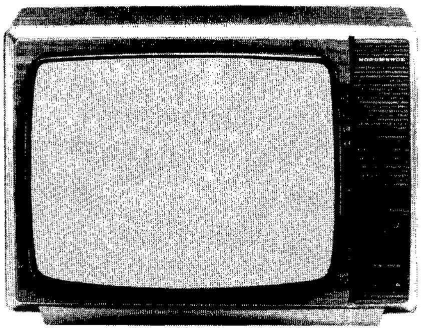

Clock
ritmo
Enable
consenso
Data
dati
H L H H L H L H L L L H H L L H
2^0
divider factor
divisore
2^{12}
2^{15}

TECHNISCHER KUNDENDIENST

Service-Information







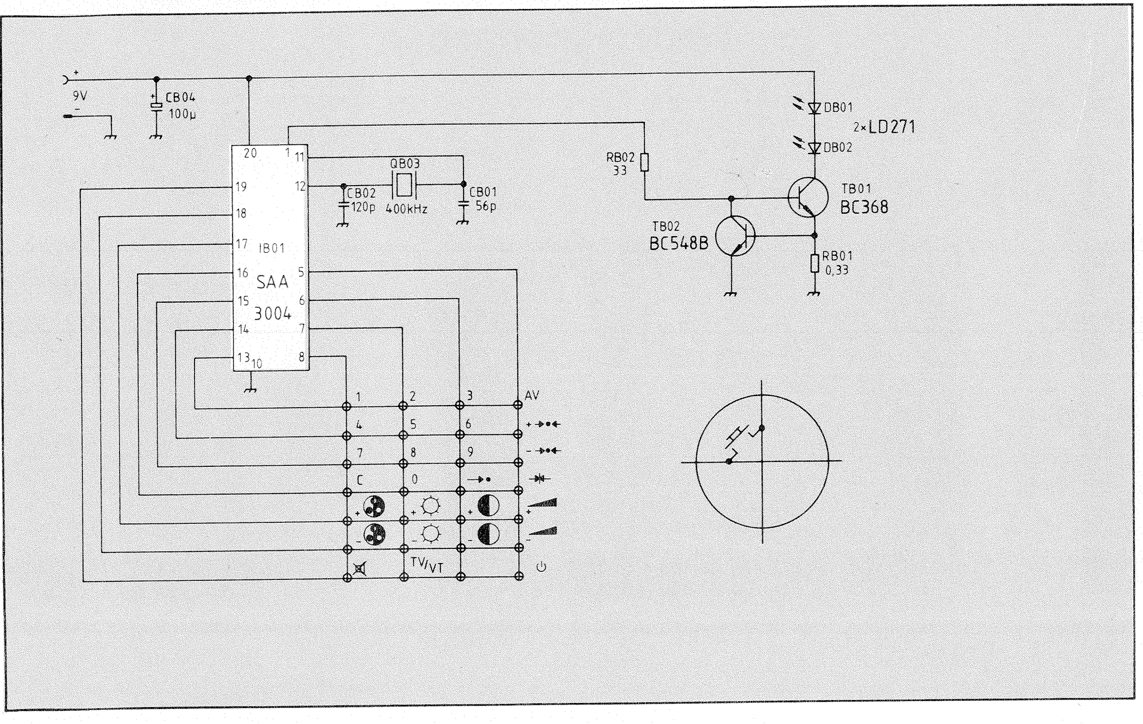
Bedienteil
Control unit **telecontrol 2239**
Elemento di comando
FFS-Chassis F 11/F 11 B

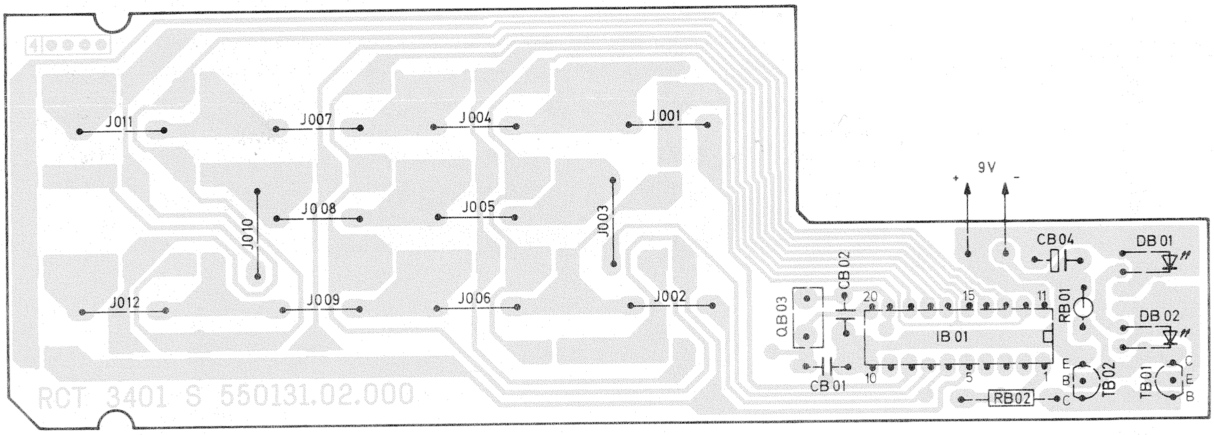
Color 3537 VT 984.543 B
Color 5537 VT Stereo 984.552 B

NORDMENDE

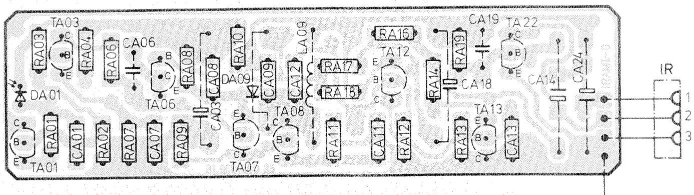
Diese Angaben und Hinweise sind ausschließlich für den Service des Fachhändlers bestimmt · Änderungen vorbehalten · These instructions are for service dealers only · Subject to modification · Questi dati e queste istruzioni sono riservati ai tecnici del servizio assistenza · Con riserva di modifiche

Infrarot-Geber
Infra-red generator **583.520**
Telecomando infrarossi


9V
CB04
100µ
IB01
SAA
3004
QB03
CB02
120p
400kHz
CB01
56p
RB02
33
DB01
DB02
2×LD271
TB01
BC368
TB02
BC548B
RB01
0,33
AV
1
2
3
4
5
6
7
8
9
C
0
TV/VT


J011
J007
J004
J001
J008
J005
J010
J003
J012
J009
J006
J002
9V
CB04
DB 01
DB 02
QB03
CB02
CB01
IB 01
RB01
RB02
TB02
TB01
RCT 3401 S 550131.02.000

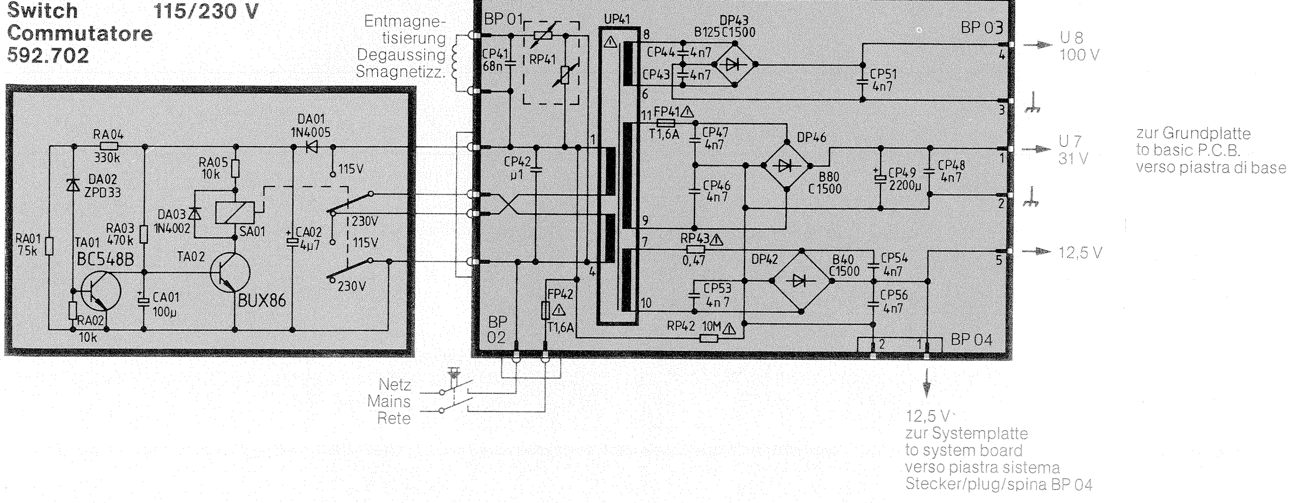
Leiterplatte Infrarot-Geber
P.C.B. Infra-red generator **583.520**
Piastra Telecomando infrarossi
Lötseite – Soldered side – Lato saldature

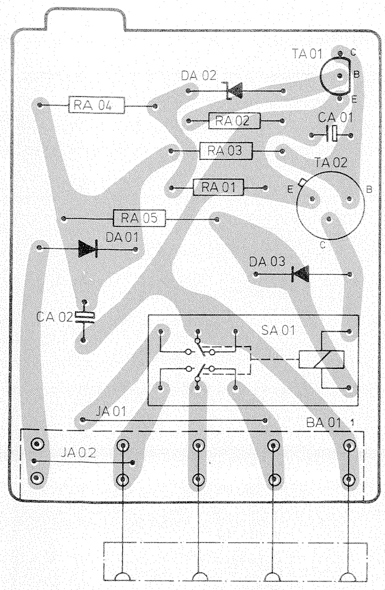

TA03
RA03
RA04
RA06
CA06
RA08
CA08
RA10
LA09
CA09
CA12
RA17
RA18
RA16
TA12
RA14
RA19
CA18
CA19
TA22
CA14
CA24
DA01
DA09
TA06
TA08
TA13
TA01
RA01
CA01
RA02
RA07
CA07
RA09
CA03
TA07
RA11
CA11
RA12
RA13
CA13
IR
1
2
3

Leiterplatte Infrarot-Vorverstärker
P.C.B., Infra-red pre-amplifier **583.521**
Piastra preamplificatore infra
Lötseite – Soldered side – Lato saldature

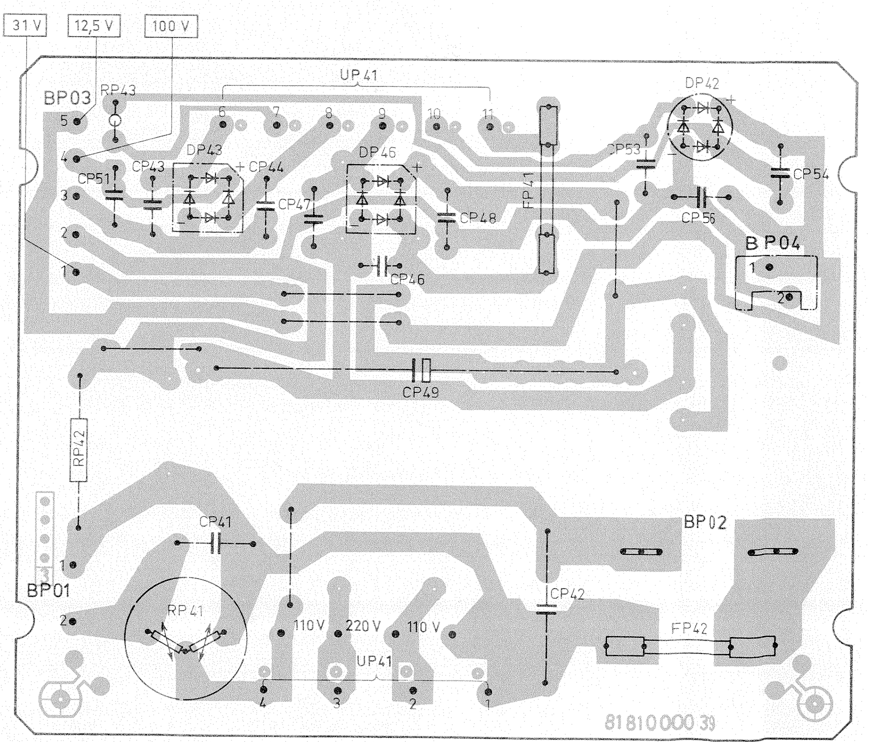
Umschalter
Switch 115/230 V
Commutatore
592.702

Leiterplatte Netzteil
P.C.B. Power unit 592.701
Piastra di rete


Entmagne-tisierung
Degaussing
Smagnetizz.
RA04
330k
DA02
ZPD33
RA01
75k
TA01
BC548B
RA03
470k
RA02
10k
CA01
100µ
RA05
10k
DA03
1N4002
TA02
BUX86
SA01
DA01
1N4005
115V
230V
CA02
4µ7
BP 01
CP41
68n
RP41
UP41
DP43
B125 C1500
CP44
4n7
CP43
4n7
CP51
4n7
BP 03
U 8
100 V
FP41
T1,6A
CP47
4n7
DP46
CP42
µ1
CP46
4n7
B80
C1500
CP49
2200µ
CP48
4n7
U 7
31 V
zur Grundplatte
to basic P.C.B.
verso piastra di base
RP43
0,47
DP42
B40
C1500
CP54
4n7
CP53
4n7
CP56
4n7
12,5 V
FP42
T1,6A
RP42 10M
BP 02
BP 04
Netz
Mains
Rete
12,5 V
zur Systemplatte
to system board
verso piastra sistema
Stecker/plug/spina BP 04

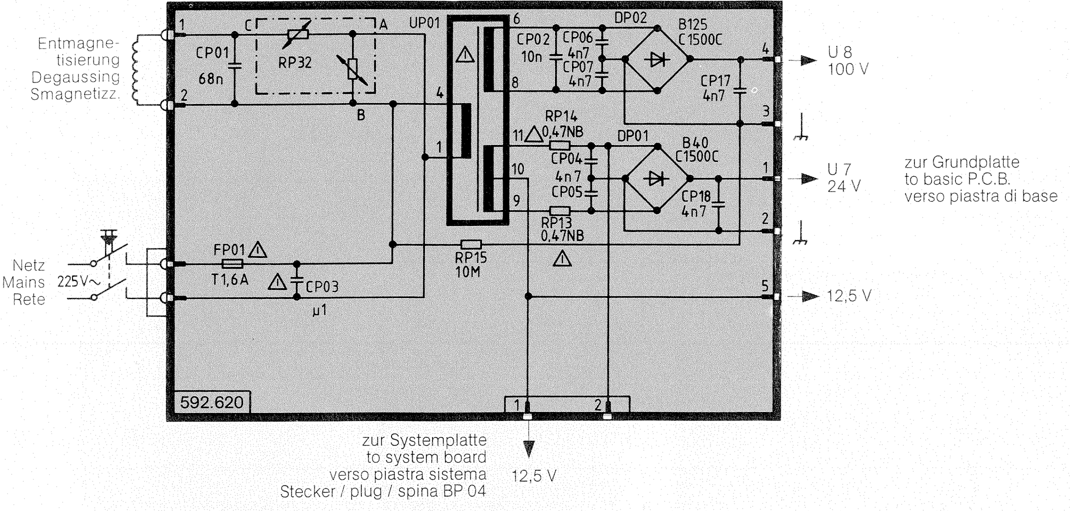

TA 01
DA 02
RA 04
RA 02
CA 01
RA 03
TA 02
RA 01
RA 05
DA 01
DA 03
CA 02
SA 01
JA 01
BA 01
JA 02

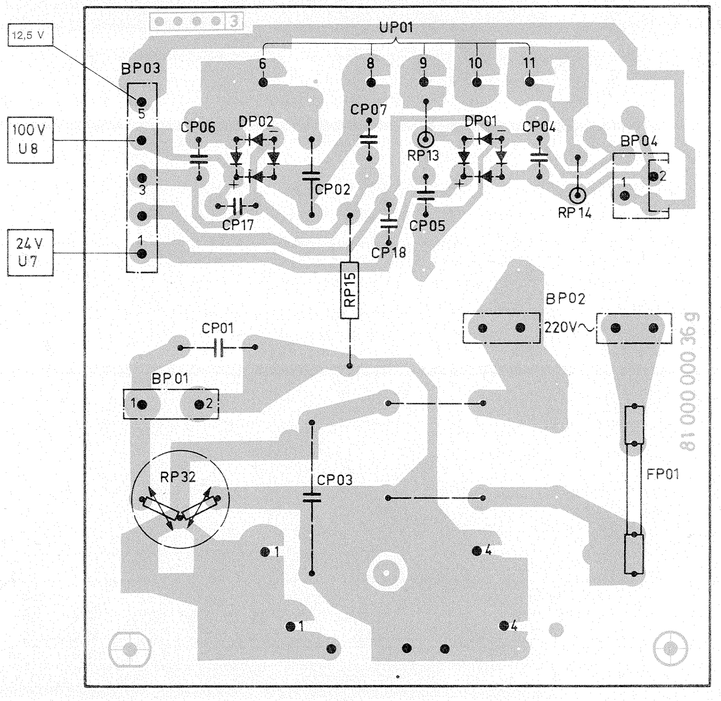
Leiterplatte Umschalter
P.C.B. Switch 592.702
Piastra commutatore
Lötseite — Soldered side — Lato saldature


31 V
12,5 V
100 V
UP 41
BP03
RP43
DP42
DP43
CP43
CP44
DP 45
CP51
CP47
CP48
CP53
CP54
CP56
FP41
BP04
CP46
CP49
RP42
CP41
BP02
BP01
RP 41
110 V
220 V
110 V
CP42
FP42
81810000 39

Leiterplatte Netzteil
P.C.B. Power unit 592.701
Piastra di rete
Lötseite — Soldered side — Lato saldature

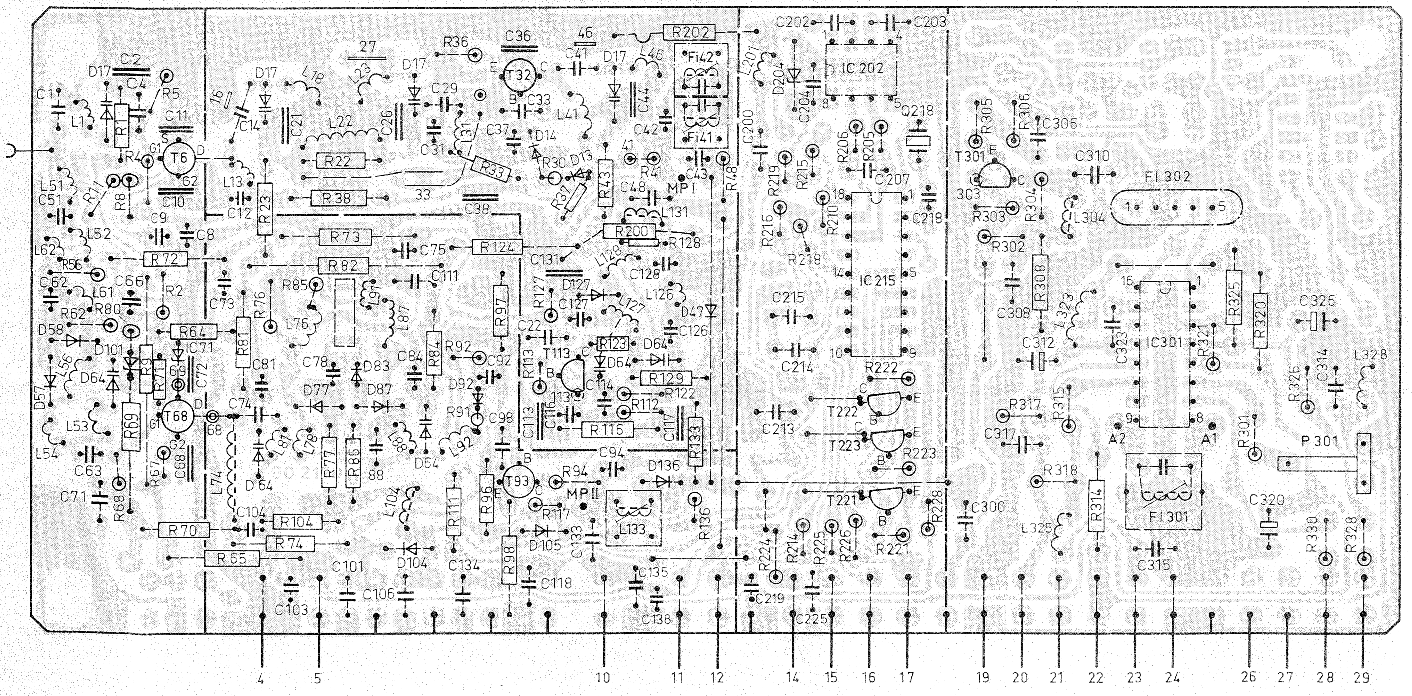
Leiterplatte Netzteil
P.C.B. Power unit 592.620
Piastra di rete


Entmagnetisierung
Degaussing
Smagnetizz.
Netz
Mains
Rete
225V~
CP01
68n
RP32
A
B
C
UP01
FP01
T1,6A
CP03
µ1
RP15
10M
DP02
B125
C1500C
CP02
10n
CP06
4n7
CP07
4n7
CP17
4n7
RP14
0,47NB
CP04
4n7
CP05
DP01
B40
C1500C
CP18
4n7
RP13
0,47NB
U 8
100 V
U 7
24 V
12,5 V
zur Grundplatte
to basic P.C.B.
verso piastra di base
592.620
zur Systemplatte
to system board
verso piastra sistema
Stecker / plug / spina BP 04
12,5 V


12,5 V
100 V
U 8
24 V
U 7
BP03
UP01
CP06
DP02
CP07
CP02
CP17
RP13
DP01
CP04
BP04
RP 14
CP05
CP18
RP15
BP02
220V~
CP01
BP 01
RP32
CP03
FP01
81 000 000 36 g

Leiterplatte Netzteil
P.C.B. Power unit 592.620
Piastra di rete

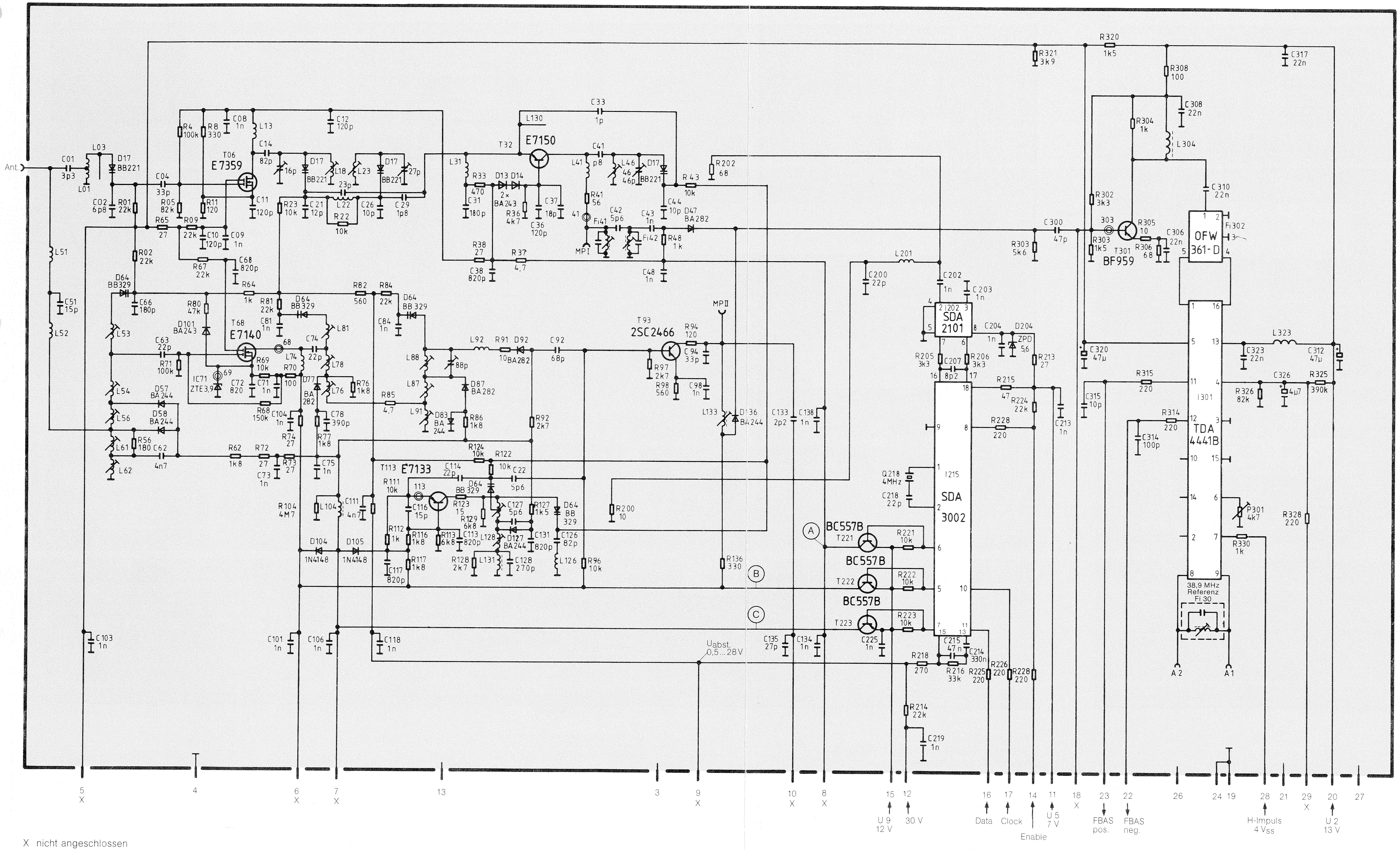
Lötseite — Soldered side — Lato saldature


T6
T32
T68
T93
T113
IC 202
IC 215
IC301
IC71
T301
T221
T222
T223
FI 302
FI 301
Fi42
Fi41
P 301
L133
4
5
10
11
12
14
15
16
17
19
20
21
22
23
24
26
27
28
29

Leiterplatte HF-Block
P.C.B. RF block 563.799
Piastra Unità AF
MTS 2004 S

Lötseite — Soldered side — Lato saldature

HF-Block
RF block **MTS 2004 S** **563.799**
Unità AF

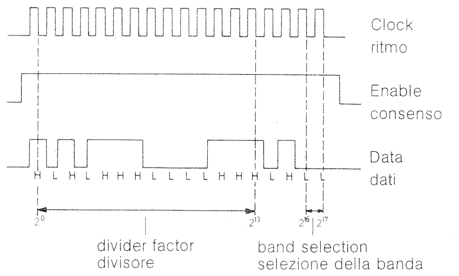


Ant.
E7359
E7150
E7140
E7133
2SC2466
BF959
SDA 2101
SDA 3002
TDA 4441B
OFW 361-D
BC557B
T221
T222
T223
Q218 4MHz
38,9 MHz Referenz Fi 30
Uabst. 0,5...28V
MPI
MPII
A
B
C
A2
A1
5 X
4
6 X
7 X
13
3
9 X
10 X
8 X
15 U9 12V
12 30V
16 Data
17 Clock
14 Enable
11 U5 7V
18 X
23 FBAS pos.
22 FBAS neg.
26
24
19
28 H-Impuls 4 Vss
21
29 X
20 U2 13V
27

X nicht angeschlossen
X not connected
X non collegate

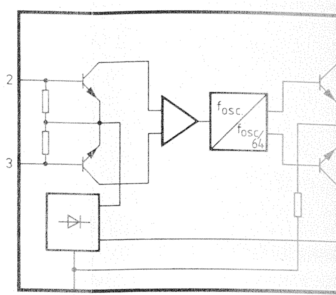
Bandumschaltung
Band switch
Commutazione di banda

Ⓐ	Ⓑ	Ⓒ	
L	H	L	Band I
L	H	H	Band III
H	L	L	Band IV/V



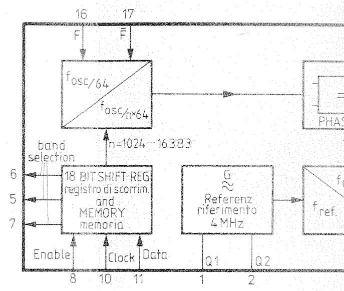
Clock
ritmo
Enable
consenso
Data
dati
H L H L H H H L L L L H H H L H L L
divider factor
divisore
band selection
selezione della banda

IC 202 SDA 2101



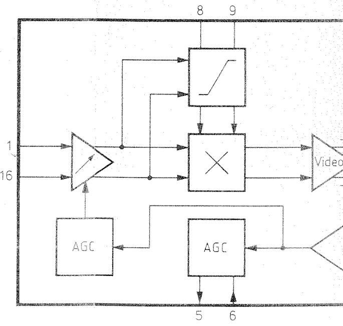
2
3
4
fosc
fosc/64

IC 215 SDA 3002

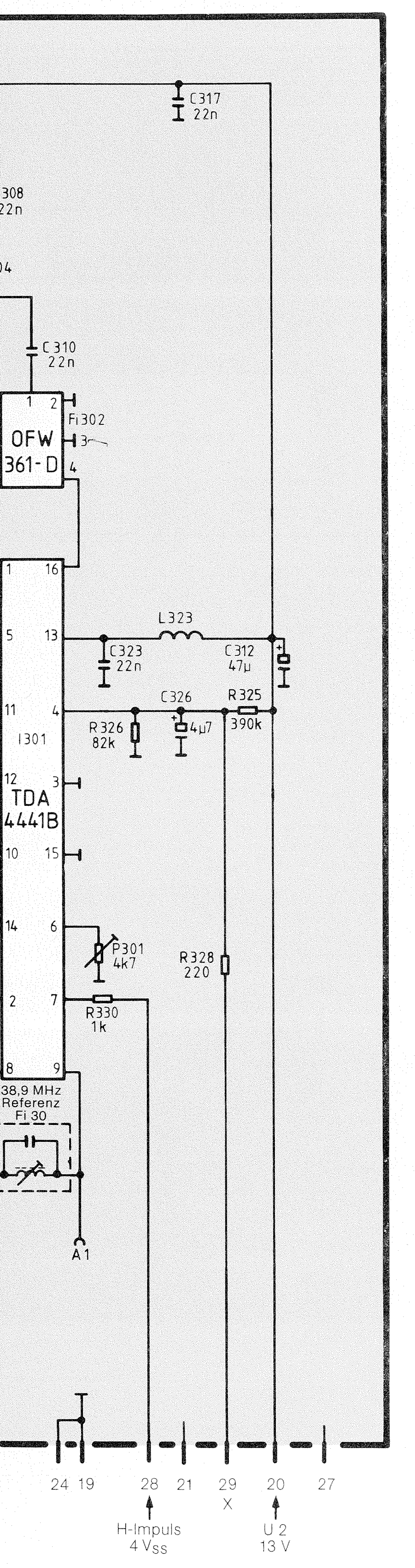


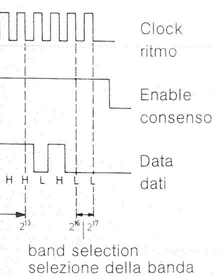
16
17
fosc/64
fosc/n·64
n=1024...16383
band selection
18 BIT SHIFT-REG registro di scorrim. and MEMORY memoria
Referenz riferimento 4MHz
fref.
PHAS
Enable
Clock
Data
Q1
Q2
6
5
7
8
10
11
1
2

IC 301 TDA 4441 B

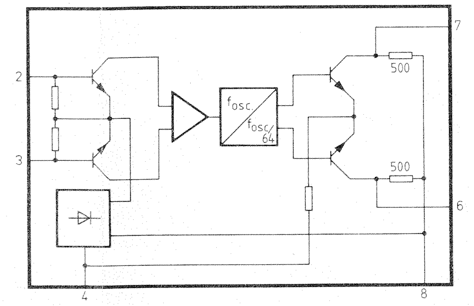


8
9
1
16
AGC
AGC
Video
5
6

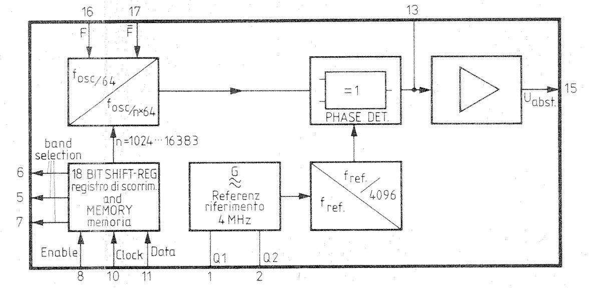

C317
22n
308
22n
C310
22n
OFW
361-D
Fi302
TDA
4441B
I301
L323
C323
22n
C312
47µ
C326
4µ7
R325
390k
R326
82k
P301
4k7
R328
220
R330
1k
38,9 MHz
Referenz
Fi 30
A1
24 19
28 21
29
X
20 27
H-Impuls
4 Vss
U 2
13 V


Clock
ritmo
Enable
consenso
Data
dati
H H L H L L
band selection
selezione della banda

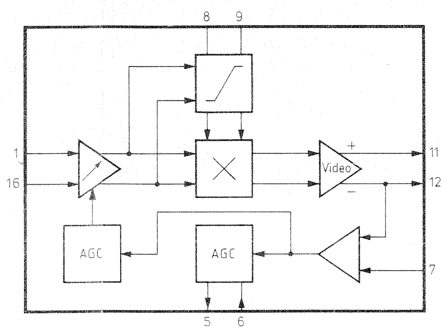
IC 202 SDA 2101


2
3
4
7
6
8
500
500
fosc
fosc/64

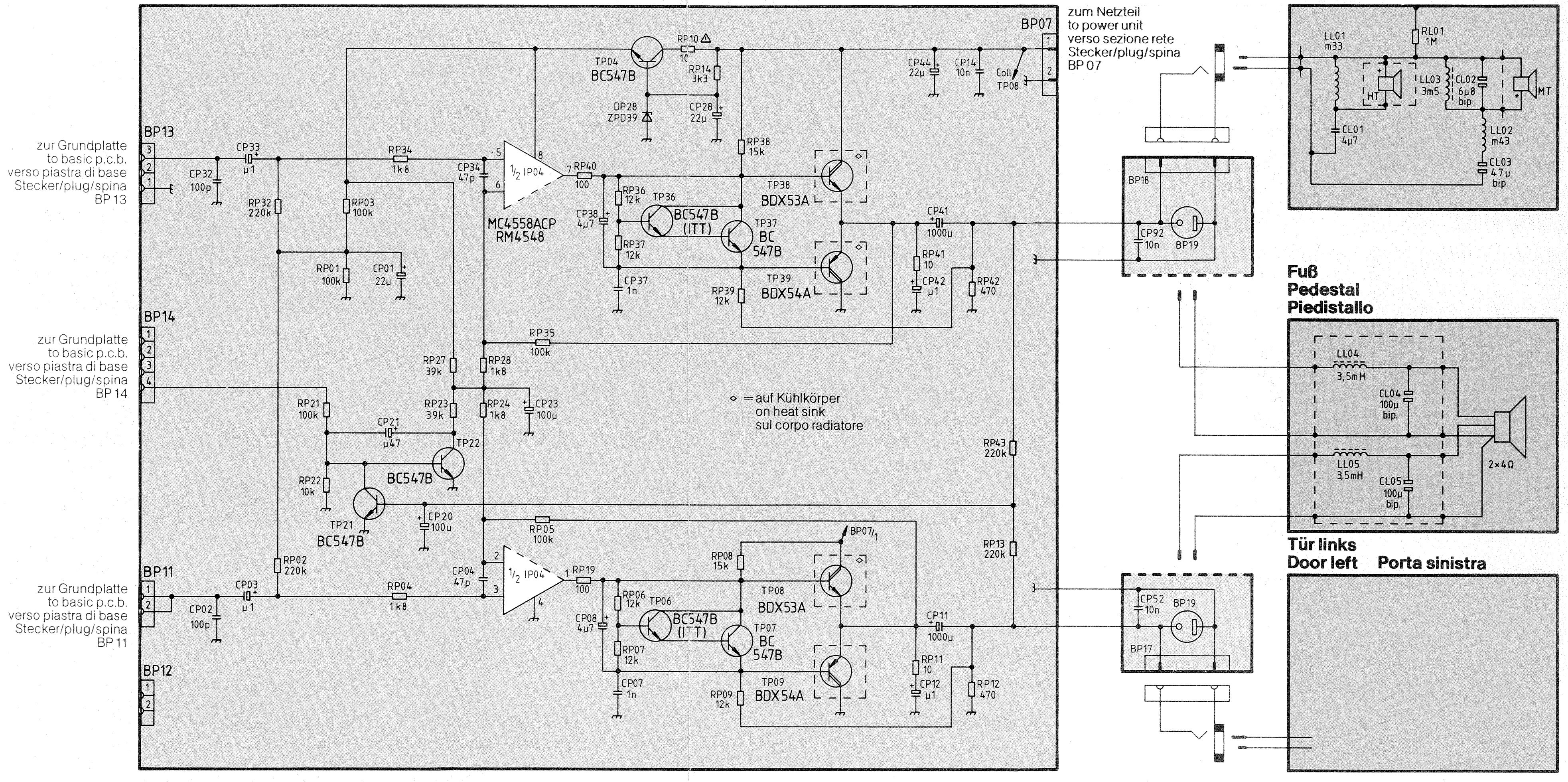
IC 215 SDA 3002

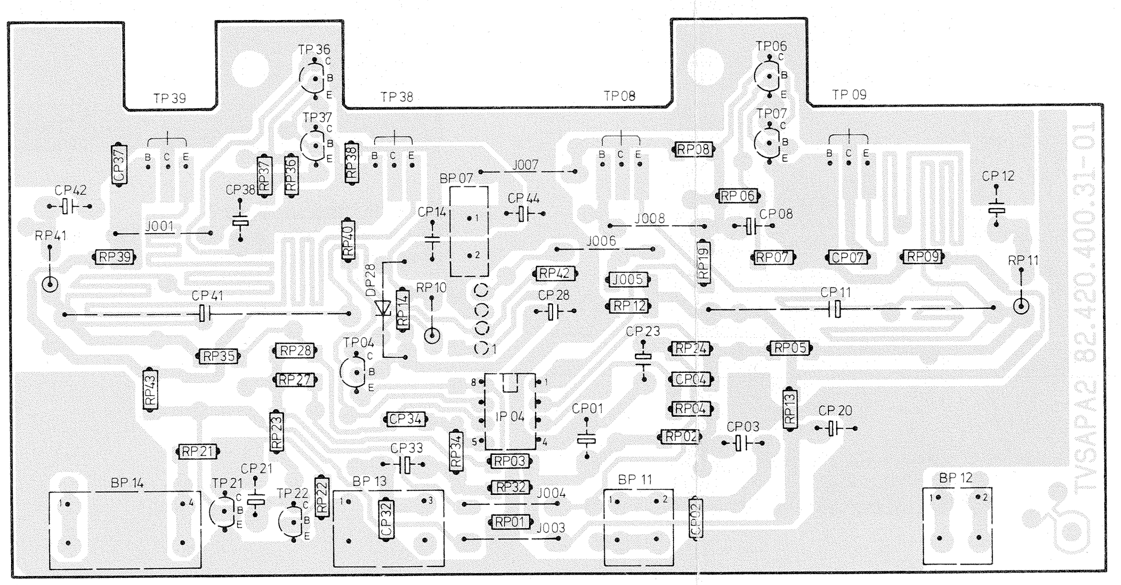

16
17
13
15
fosc/64
fosc/n×64
band selection
n=1024…16383
18 BIT SHIFT-REG registro di scomm. and MEMORY memoria
Referenz riferimento 4 MHz
fref
fref/4096
=1
PHASE DET
Uabst
6
5
7
Enable
Clock
Data
Q1
Q2
8 10 11
1 2

IC 301 TDA 4441 B

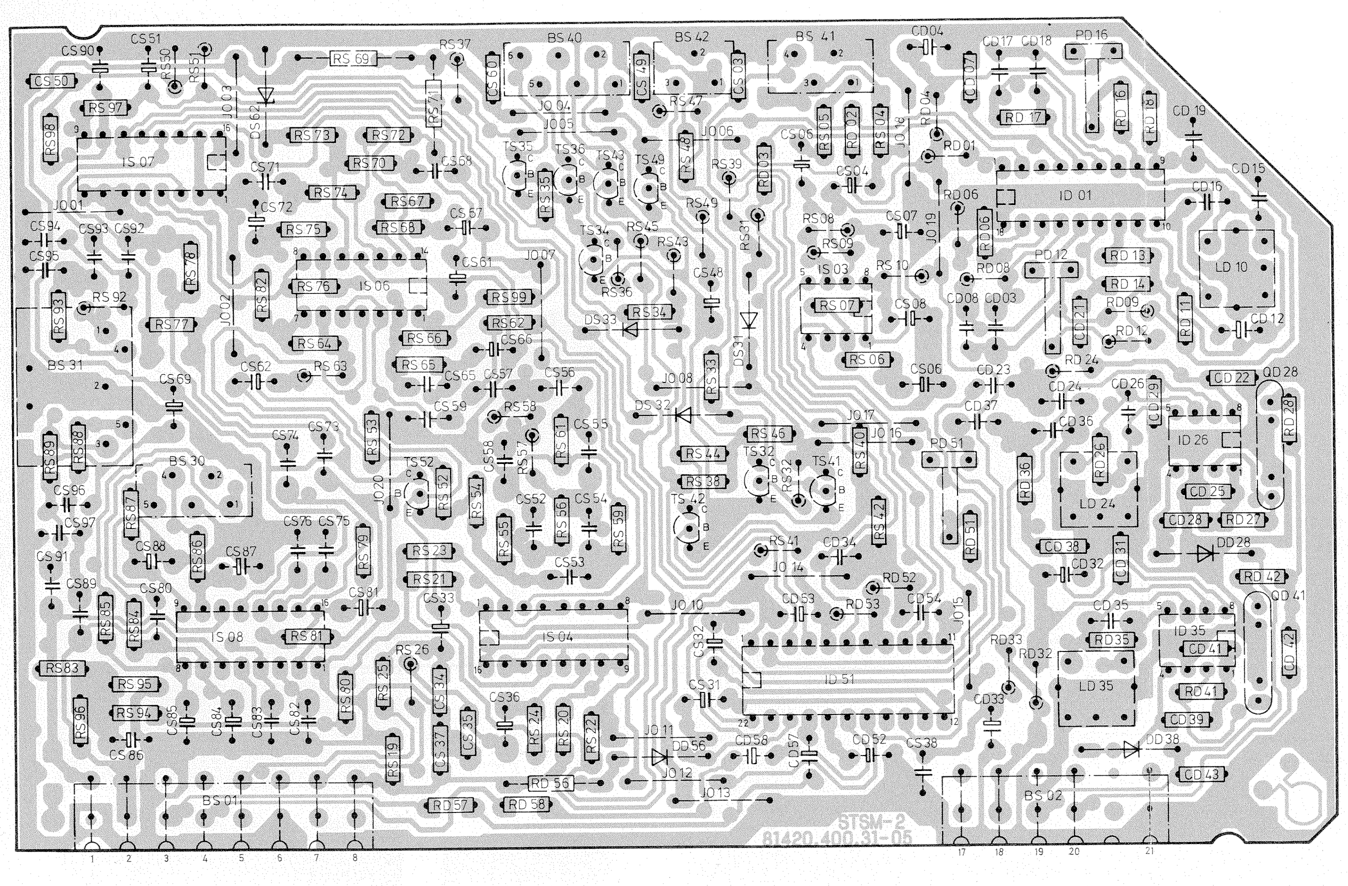

8 9
1
16
11
12
7
Video
AGC
AGC
5 6

NF-Verstärker
AF amplifier 592.688
Amplificatore BF

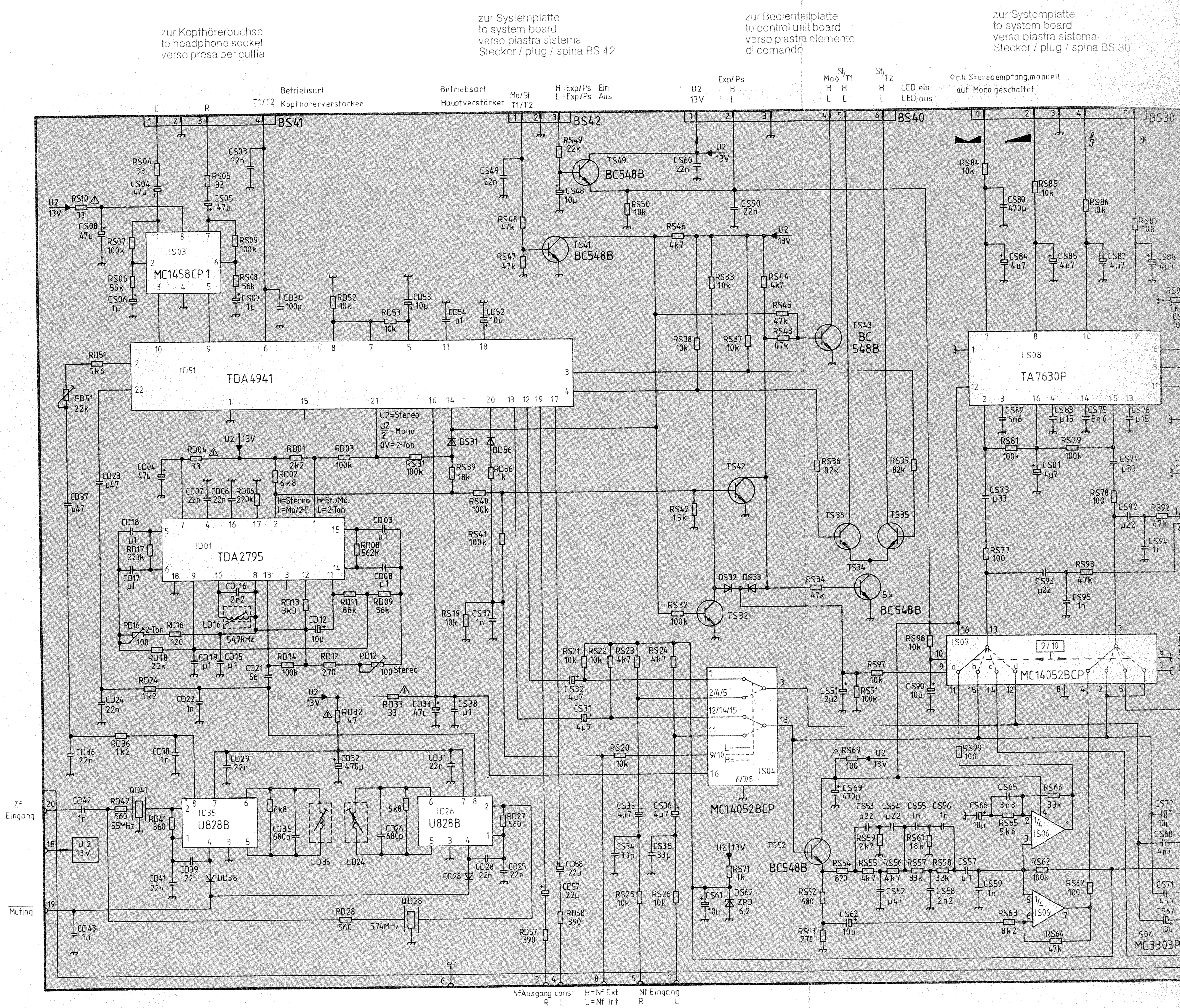

Tür rechts
Door right
Porta destra
Fuß
Pedestal
Piedistallo
Tür links
Door left
Porta sinistra
zur Grundplatte
to basic p.c.b.
verso piastra di base
Stecker/plug/spina
BP 13
BP 14
BP 11
BP12
BP07
zum Netzteil
to power unit
verso sezione rete
Stecker/plug/spina
BP 07
TP04
BC547B
RF10
1Ω
RP14
3k3
DP28
ZPD39
CP28
22µ
CP44
22µ
CP14
10n
Coil
TP08
CP33
µ1
CP32
100p
RP32
220k
RP34
1k8
RP03
100k
CP34
47p
1/2 IP04
MC4558ACP
RM4548
RP40
100
CP38
4µ7
RP36
12k
TP36
BC547B
(ITT)
RP37
12k
CP37
1n
TP37
BC
547B
RP38
15k
TP38
BDX53A
TP39
BDX54A
RP39
12k
CP41
1000µ
RP41
10
CP42
µ1
RP42
470
RP01
100k
CP01
22µ
RP35
100k
RP27
39k
RP28
1k8
RP23
39k
RP24
1k8
CP23
100µ
RP21
100k
CP21
µ47
TP22
BC547B
RP22
10k
TP21
BC547B
CP20
100µ
RP05
100k
RP02
220k
CP03
µ1
CP02
100p
RP04
1k8
CP04
47p
1/2 IP04
RP19
100
CP08
4µ7
RP06
12k
TP06
BC547B
(ITT)
RP07
12k
CP07
1n
TP07
BC
547B
RP08
15k
TP08
BDX53A
TP09
BDX54A
RP09
12k
BP07/1
CP11
1000µ
RP11
10
CP12
µ1
RP12
470
RP43
220k
RP13
220k
◇ =auf Kühlkörper
on heat sink
sul corpo radiatore
LL01
m33
RL01
1M
HT
LL03
3m5
CL02
6µ8
bip
MT
CL01
4µ7
LL02
m43
CL03
4.7µ
bip.
BP18
CP92
10n
BP19
LL04
3,5mH
CL04
100µ
bip.
LL05
3,5mH
CL05
100µ
bip.
2×4Ω
CP52
10n
BP19
BP17


TP36
TP37
TP39
TP38
TP08
TP09
TP06
TP07
CP37
CP42
RP41
RP39
J001
CP38
RP37
RP36
RP38
RP40
BP07
CP14
J007
CP44
J006
J008
RP06
CP08
RP07
CP07
RP09
CP12
RP11
DP28
RP10
RP14
RP19
RP42
J005
RP12
CP41
CP28
CP11
RP35
RP28
RP27
TP04
CP23
RP24
RP05
CP04
RP04
RP13
RP43
RP23
CP34
IP04
CP01
RP02
CP03
CP20
RP21
CP33
RP34
RP03
CP21
TP21
TP22
RP22
BP 14
BP 13
CP32
RP32
J004
RP01
J003
BP 11
CP02
BP 12
TVSAPA2 82.420.400.31-01

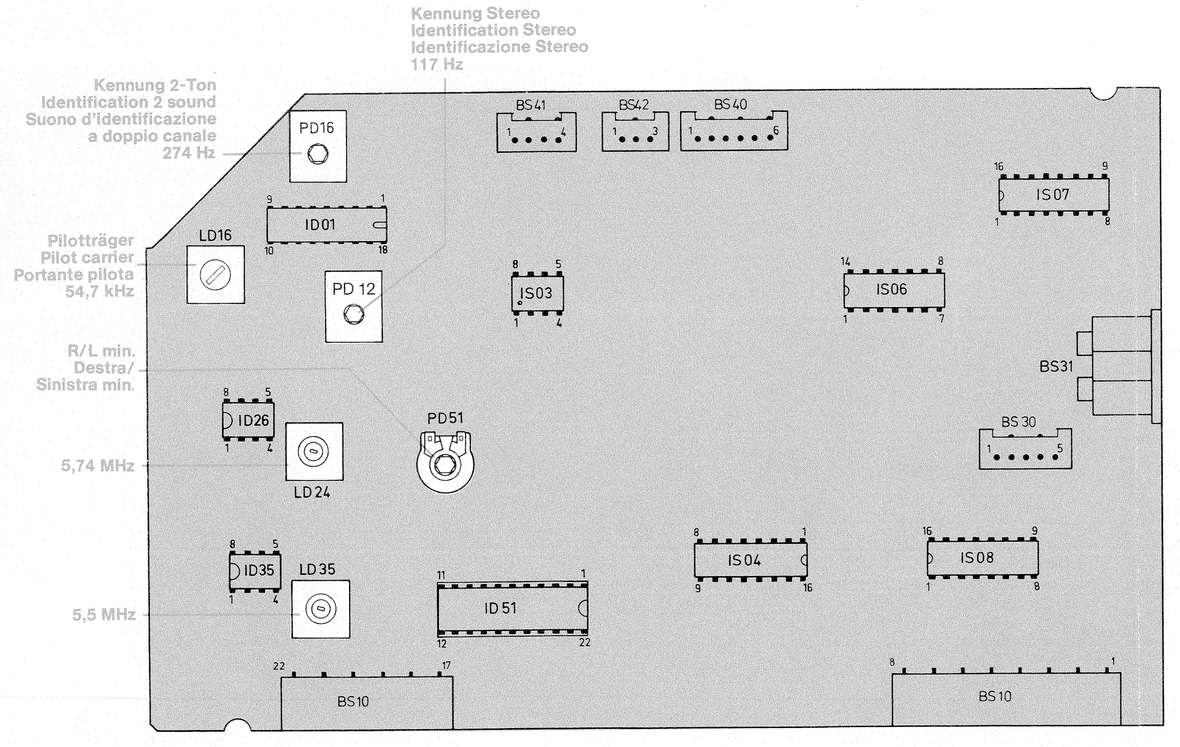
Leiterplatte NF-Verstärker
P.C.B. AF amplifier 592.688
Piastra amplificatore BF
Lötseite – Soldered side – Lato saldature


STSM-2
81420.400.31-05
BS 31
BS 30
BS 01
BS 02
IS 07
IS 08
IS 04
ID 51
ID 01
LD 10
LD 24
LD 35
ID 25
ID 35

Ton-ZF/Stereo-Modul
Sound IF Stereo module **592.684**
Modulo FI tono stereo
Lötseite — Soldered side — Lato saldature

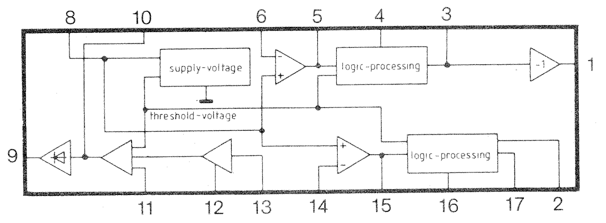

zur Kopfhörerbuchse
to headphone socket
verso presa per cuffia
zur Systemplatte
to system board
verso piastra sistema
Stecker / plug / spina BS 42
zur Bedienteilplatte
to control unit board
verso piastra elemento di comando
zur Systemplatte
to system board
verso piastra sistema
Stecker / plug / spina BS 30
Betriebsart T1/T2 Kopfhörerverstärker
Betriebsart Hauptverstärker
d.h. Stereoempfang manuell auf Mono geschaltet
BS41
BS42
BS40
BS30
TDA4941
TDA2795
MC1458CP1
TA7630P
MC14052BCP
MC3303P
U828B
BC548B
Zf Eingang
Muting
NfAusgang const. R L
H=Nf Ext L=Nf Int
Nf Eingang R L
zur Grundplatte, Stecker BS 10
to basic p.c.b., plug BS 10
verso piastra di base, spina BS 10

Ton-ZF/Stereo-Modul
Sound IF Stereo module **592.684**
Modulo FI tono stereo

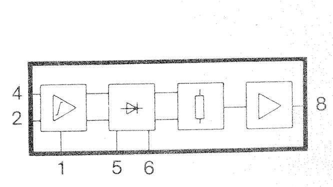

Kennung Stereo
Identification Stereo
Identificazione Stereo
117 Hz
Kennung 2-Ton
Identification 2 sound
Suono d'identificazione a doppio canale
274 Hz
Pilotträger
Pilot carrier
Portante pilota
54,7 kHz
R/L min.
Destra/Sinistra min.
5,74 MHz
5,5 MHz
PD16
LD16
PD 12
PD51
ID01
IS03
IS06
IS07
ID26
LD24
ID35
LD35
ID 51
IS04
IS08
BS41
BS42
BS40
BS31
BS 30
BS10

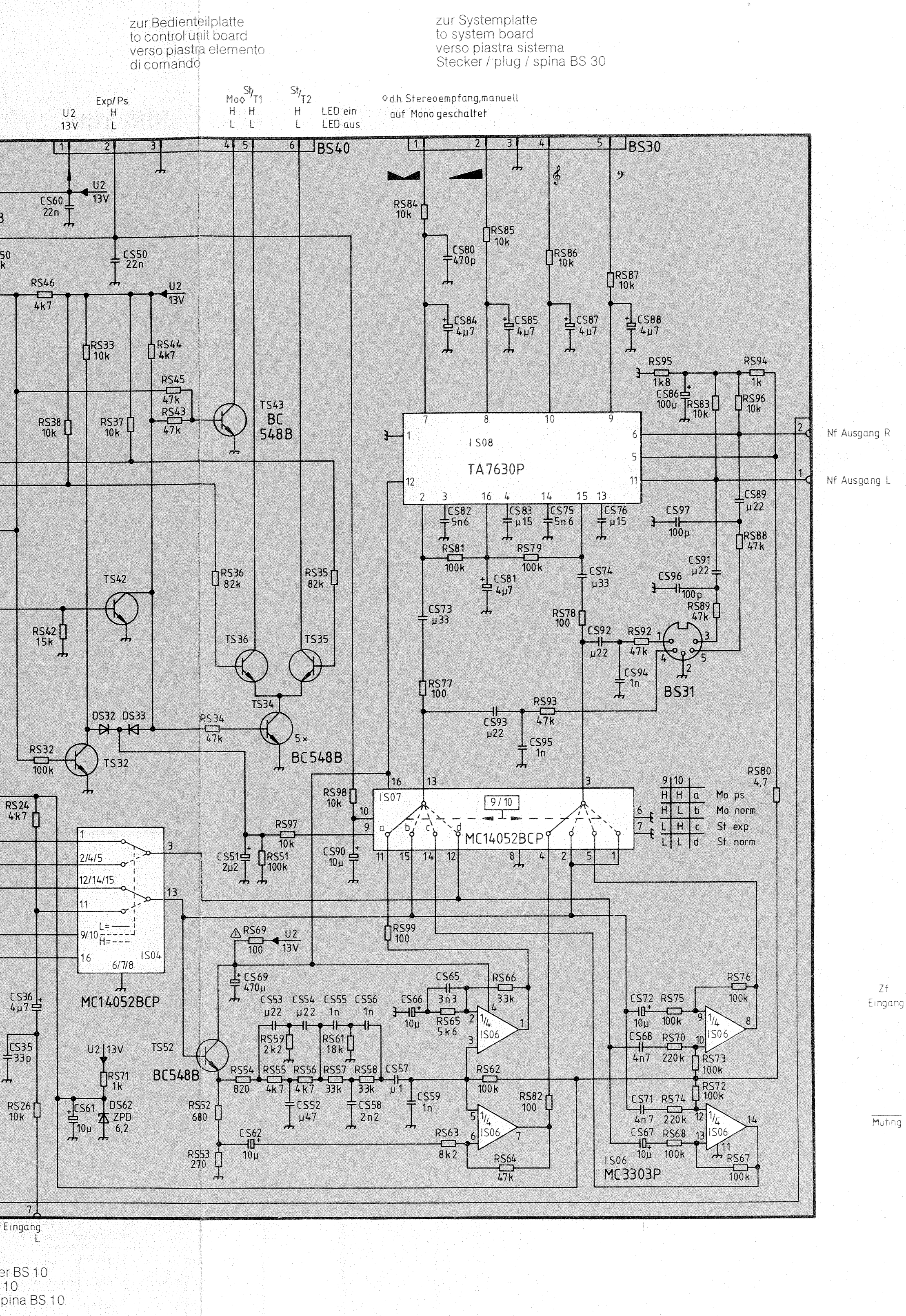
Ton-ZF/Stereo-Modul
Sound IF Stereo module **592.684**
Modulo FI tono stereo
Bestückungsseite — Component side — Parte componenti

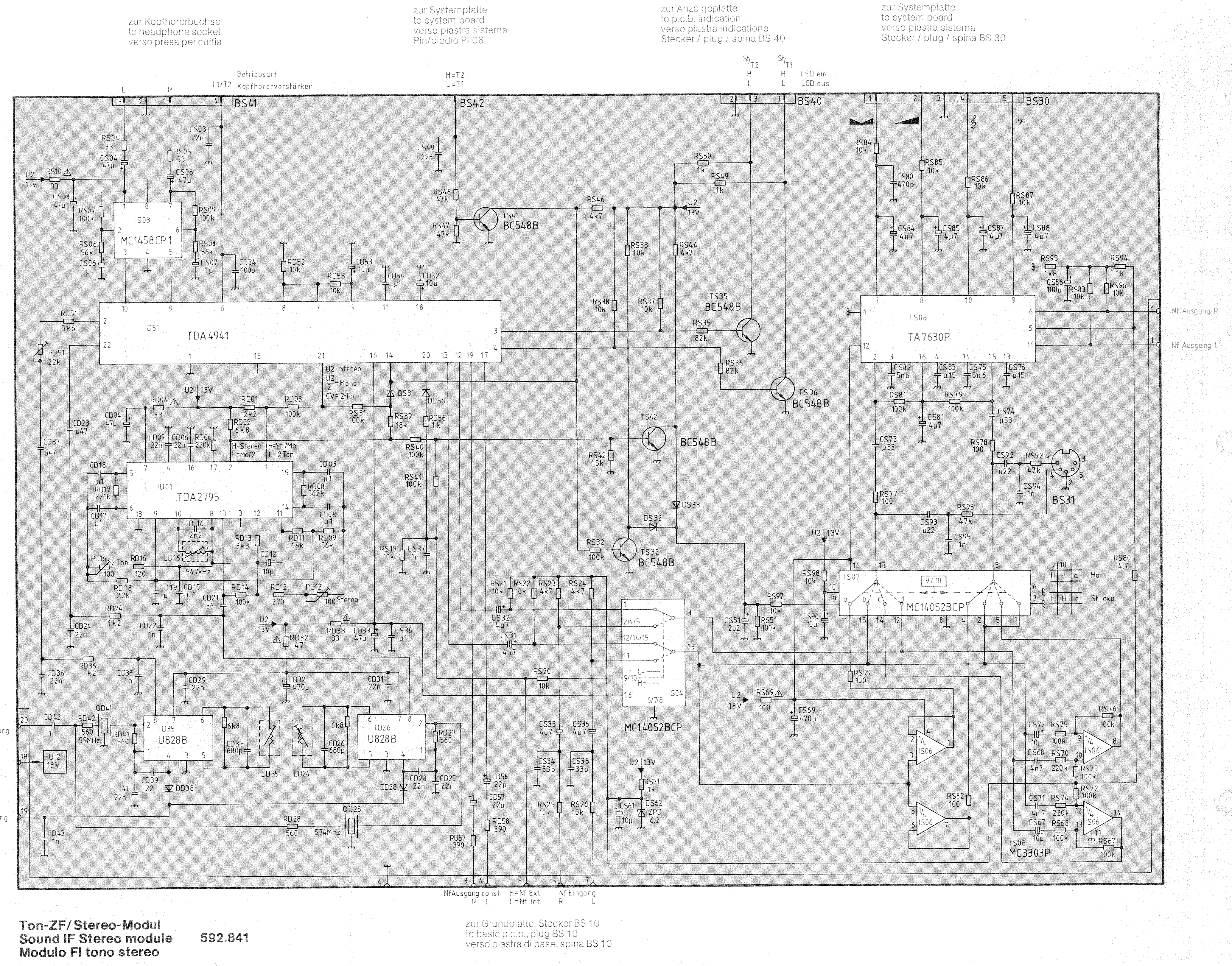
ID 01 TDA 2795


supply-voltage
threshold-voltage
logic-processing
logic-processing
8
10
6
5
4
3
1
9
11
12
13
14
15
16
17
2

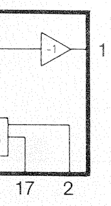
ID 26/35 U 828 B



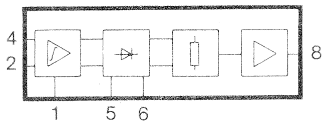

zur Bedienteilplatte
to control unit board
verso piastra elemento di comando
zur Systemplatte
to system board
verso piastra sistema
Stecker / plug / spina BS 30
◊d.h. Stereoempfang,manuell auf Mono geschaltet
LED ein
LED aus
BS40
BS30
TA7630P
MC14052BCP
MC3303P
BS31
Nf Ausgang R
Nf Ausgang L
Eingang
L
er BS 10
10
pina BS 10


zur Kopfhörerbuchse
to headphone socket
verso presa per cuffia
zur Systemplatte
to system board
verso piastra sistema
Pin/piedio PI 06
zur Anzeigeplatte
to p.c.b. indication
verso piastra indicatione
Stecker / plug / spina BS 40
zur Systemplatte
to system board
verso piastra sistema
Stecker / plug / spina BS 30
Betriebsart
T1/T2 Kopfhörerverstärker
BS41
BS42
BS40
BS30
MC1458CP1
TDA4941
TDA2795
TA7630P
MC14052BCP
MC3303P
U828B
BS31
Zf Eingang
Muting
Nf Ausgang R
Nf Ausgang L
NfAusgang const. R L
H=Nf Ext L=Nf int
Nf Eingang R L
zur Grundplatte, Stecker BS 10
to basic p.c.b., plug BS 10
verso piastra di base, spina BS 10

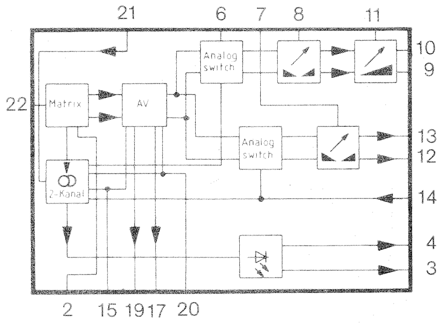
Ton-ZF/Stereo-Modul
Sound IF Stereo module **592.841**
Modulo FI tono stereo



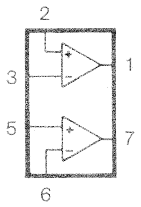
ID 26/35 U 828 B



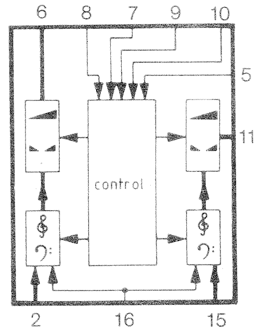
ID 51 TDA 4941

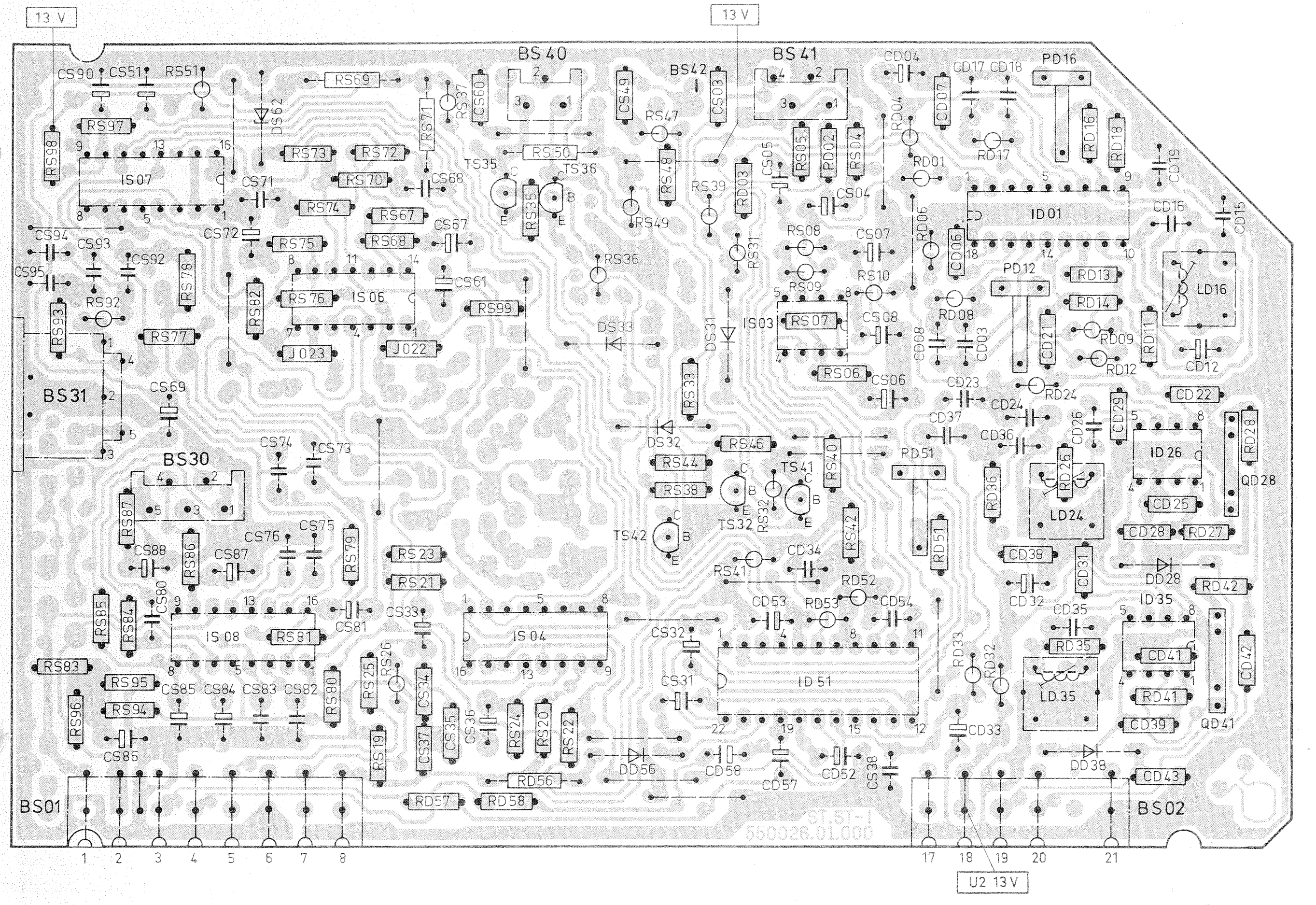

21
6
7
8
11
10
9
22
13
12
14
4
3
Matrix
AV
Analog switch
Analog switch
2-Kanal
2
15
19
17
20

IS 03 MC 1458 CP 1

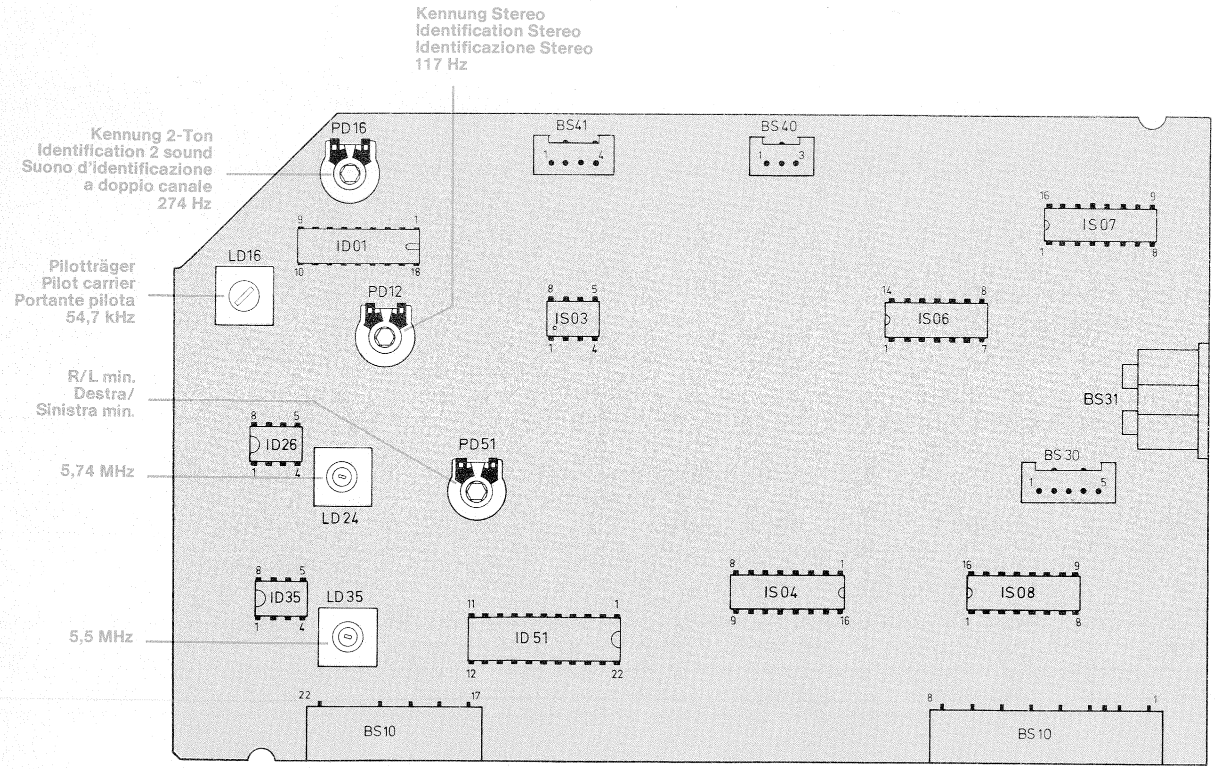


IS 08 TA 7630 P


6
8
7
9
10
5
11
control
2
16
15


13 V
13 V
BS 40
BS 41
BS42
BS31
BS30
BS01
BS02
IS07
IS06
IS08
IS04
IS03
ID01
ID26
ID35
ID51
LD16
LD24
LD35
PD16
PD12
PD51
TS41
TS42
TS32
TS35
TS36
550026.01.000
1 2 3 4 5 6 7 8
17 18 19 20 21
U2 13 V

Ton-ZF/Stereo-Modul
Sound IF stereo module 592.841
Modulo FI tono stereo
Lötseite – Soldered side – Lato saldature

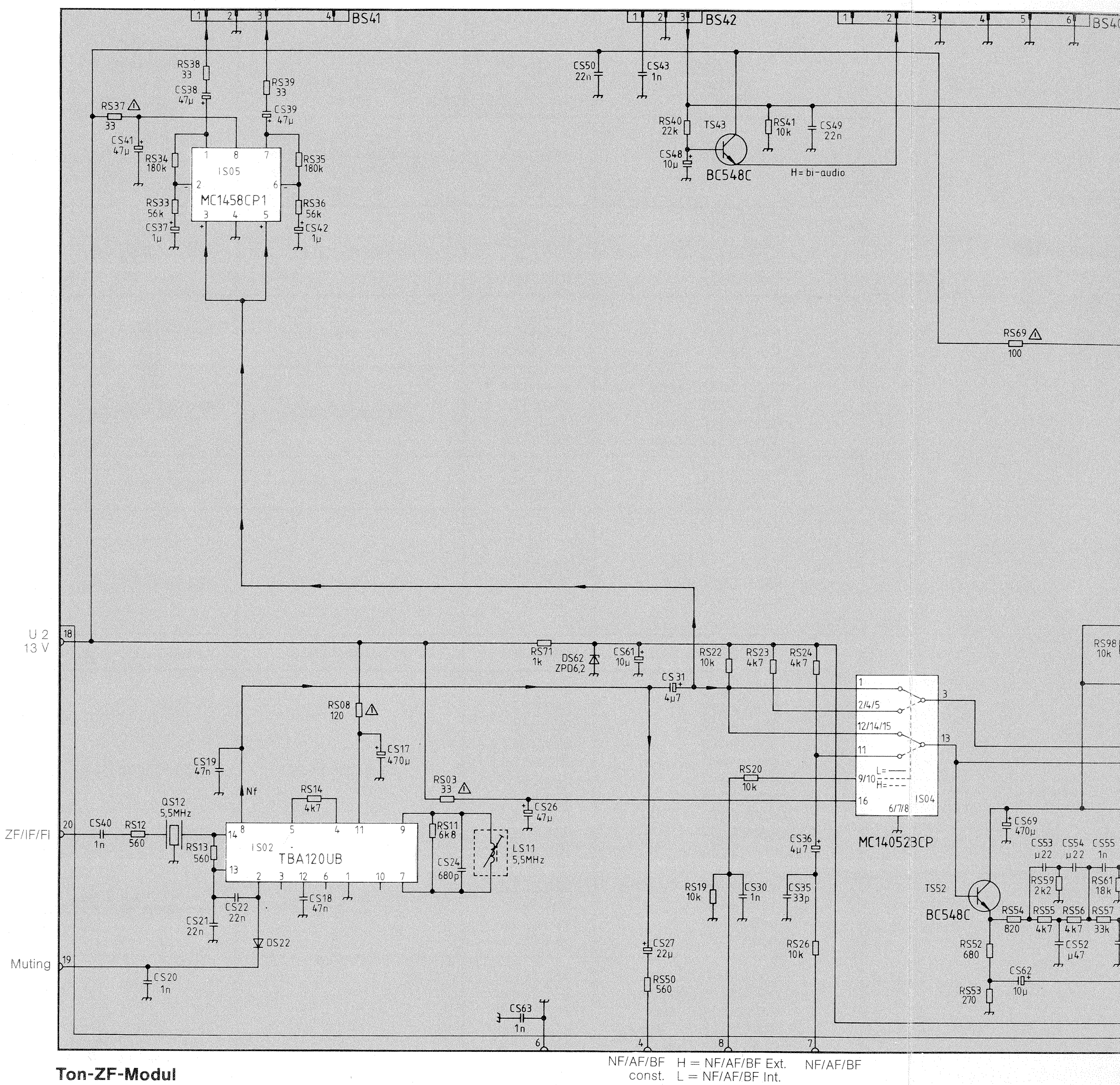

Kennung Stereo
Identification Stereo
Identificazione Stereo
117 Hz
Kennung 2-Ton
Identification 2 sound
Suono d'identificazione
a doppio canale
274 Hz
Pilotträger
Pilot carrier
Portante pilota
54,7 kHz
R/L min.
Destra/
Sinistra min.
5,74 MHz
5,5 MHz
PD16
BS41
BS40
IS07
LD16
ID01
PD12
IS03
IS06
BS31
ID26
PD51
LD24
BS30
ID35
LD35
ID51
IS04
IS08
BS10
BS10

Ton-ZF/Stereo-Modul
Sound IF Stereo module 592.841
Modulo FI tono stereo
Bestückungsseite – Component side – Parte componenti

zur Kopfhörerbuchse
to headphone socket
verso presa per cuffia

zur Systemplatte
to system board
verso piastra sistema
Stecker / plug / spina BS 42

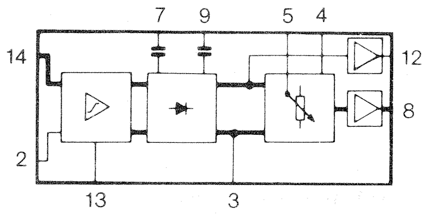
zur Bedienteilplatte
to control unit board
verso piastra elemento
di comando


BS41
BS42
IS05
MC1458CP1
TS43
BC548C
H = bi-audio
U 2
13 V
ZF/IF/FI
Muting
QS12
5,5MHz
IS02
TBA120UB
LS11
5,5MHz
MC140523CP
IS04
TS52
BC548C
DS62
ZPD6,2
DS22
NF/AF/BF
const.
H = NF/AF/BF Ext.
L = NF/AF/BF Int.
NF/AF/BF

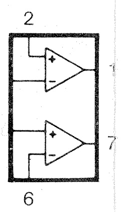
Ton-ZF-Modul
Sound IF module 560.789.6
Modulo FI tono
bi-audio

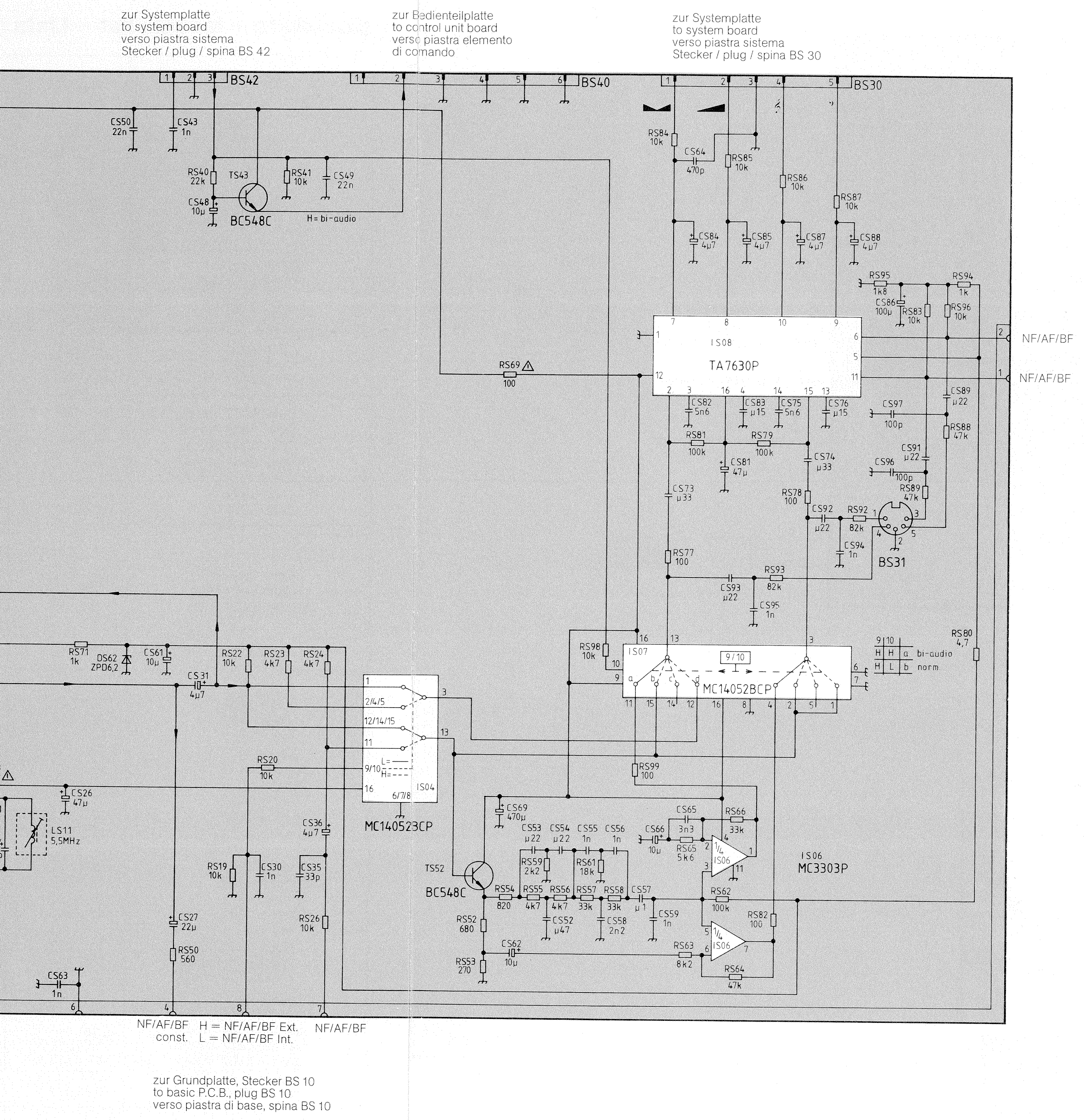
zur Grundplatte, Stecker BS 10
to basic P.C.B., plug BS 10
verso piastra di base, spina BS 10

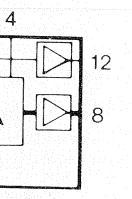
IS 02 TBA 120 UB


7
9
5
4
14
12
8
2
13
3

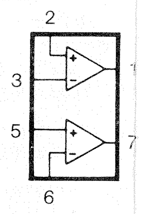
IS 05 MC 1458 CP 1



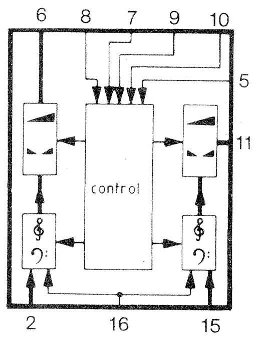

zur Systemplatte
to system board
verso piastra sistema
Stecker / plug / spina BS 42
zur Bedienteilplatte
to control unit board
verso piastra elemento di comando
zur Systemplatte
to system board
verso piastra sistema
Stecker / plug / spina BS 30
BS42
BS40
BS30
CS50 22n
CS43 1n
RS40 22k
TS43
CS48 10µ
BC548C
RS41 10k
CS49 22n
H = bi-audio
RS84 10k
CS64 470p
RS85 10k
RS86 10k
RS87 10k
CS84 4µ7
CS85 4µ7
CS87 4µ7
CS88 4µ7
RS95 1k8
CS86 100µ
RS83 10k
RS94 1k
RS96 10k
IS08
TA7630P
RS69 100
NF/AF/BF
NF/AF/BF
CS82 5n6
CS83 µ15
CS75 5n6
CS76 µ15
CS97 100p
CS89 µ22
RS81 100k
RS79 100k
RS88 47k
CS81 47µ
CS74 µ33
CS91 µ22
CS96 100p
RS89 47k
CS73 µ33
RS78 100
CS92 µ22
RS92 82k
CS94 1n
BS31
RS77 100
CS93 µ22
RS93 82k
CS95 1n
RS98 10k
IS07
MC14052BCP
9/10
H H a bi-audio
H L b norm
RS80 4,7
RS71 1k
DS62 ZPD6,2
CS61 10µ
RS22 10k
RS23 4k7
RS24 4k7
CS31 4µ7
RS20 10k
IS04
MC140523CP
CS26 47µ
LS11 5,5MHz
CS36 4µ7
RS99 100
CS69 470µ
CS65 3n3
RS66 33k
CS53 µ22
CS54 µ22
CS55 1n
CS56 1n
CS66 10µ
RS65 5k6
IS06
MC3303P
RS59 2k2
RS61 18k
TS52
BC548C
RS54 820
RS55 4k7
RS56 4k7
RS57 33k
RS58 33k
CS57 µ1
RS62 100k
CS52 µ47
CS58 2n2
CS59 1n
RS82 100
RS19 10k
CS30 1n
CS35 33p
RS26 10k
CS27 22µ
RS50 560
RS52 680
CS62 10µ
RS53 270
RS63 8k2
RS64 47k
CS63 1n
NF/AF/BF const.
H = NF/AF/BF Ext.
L = NF/AF/BF Int.
NF/AF/BF
zur Grundplatte, Stecker BS 10
to basic P.C.B., plug BS 10
verso piastra di base, spina BS 10

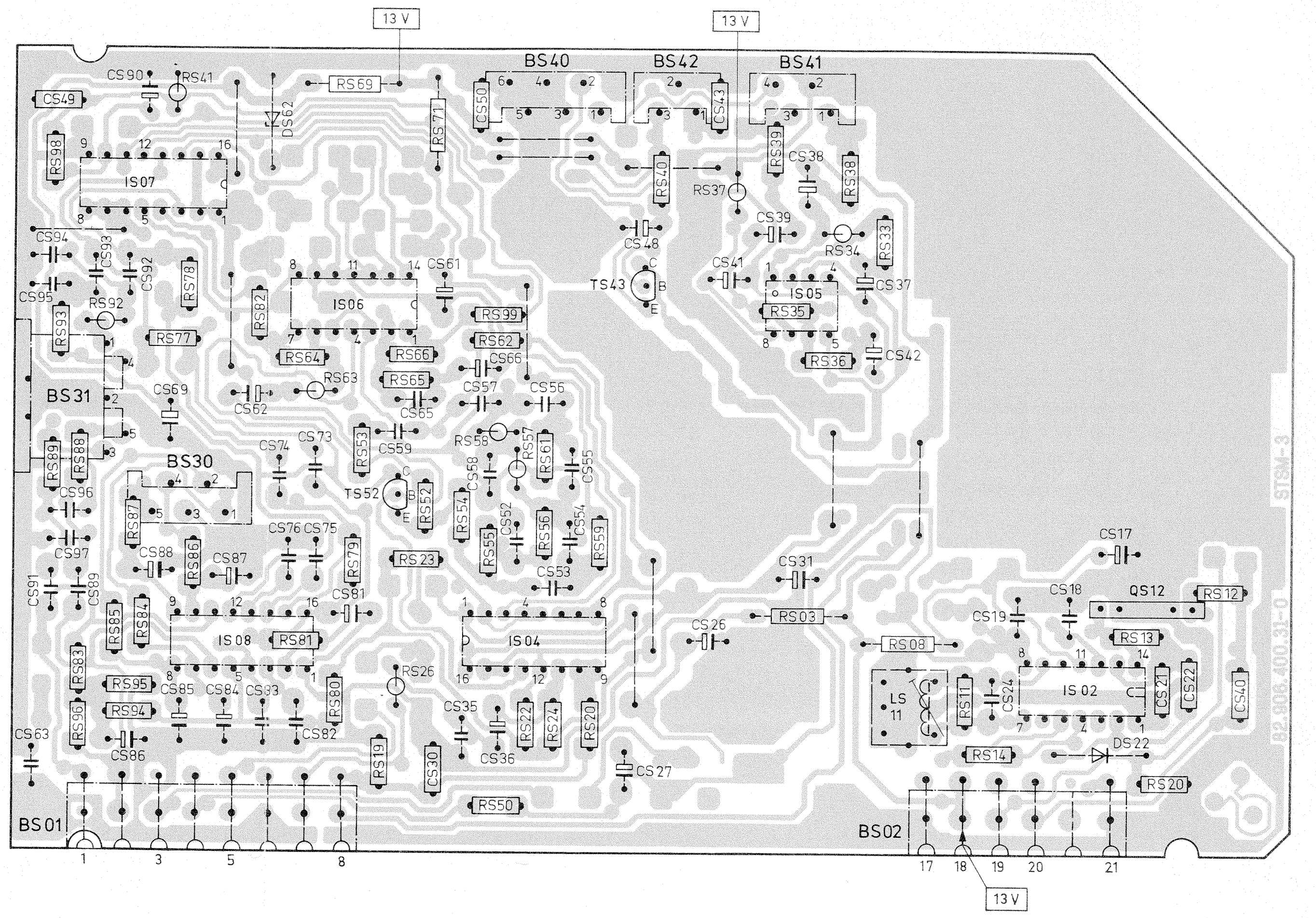


IS 05 MC 1458 CP 1



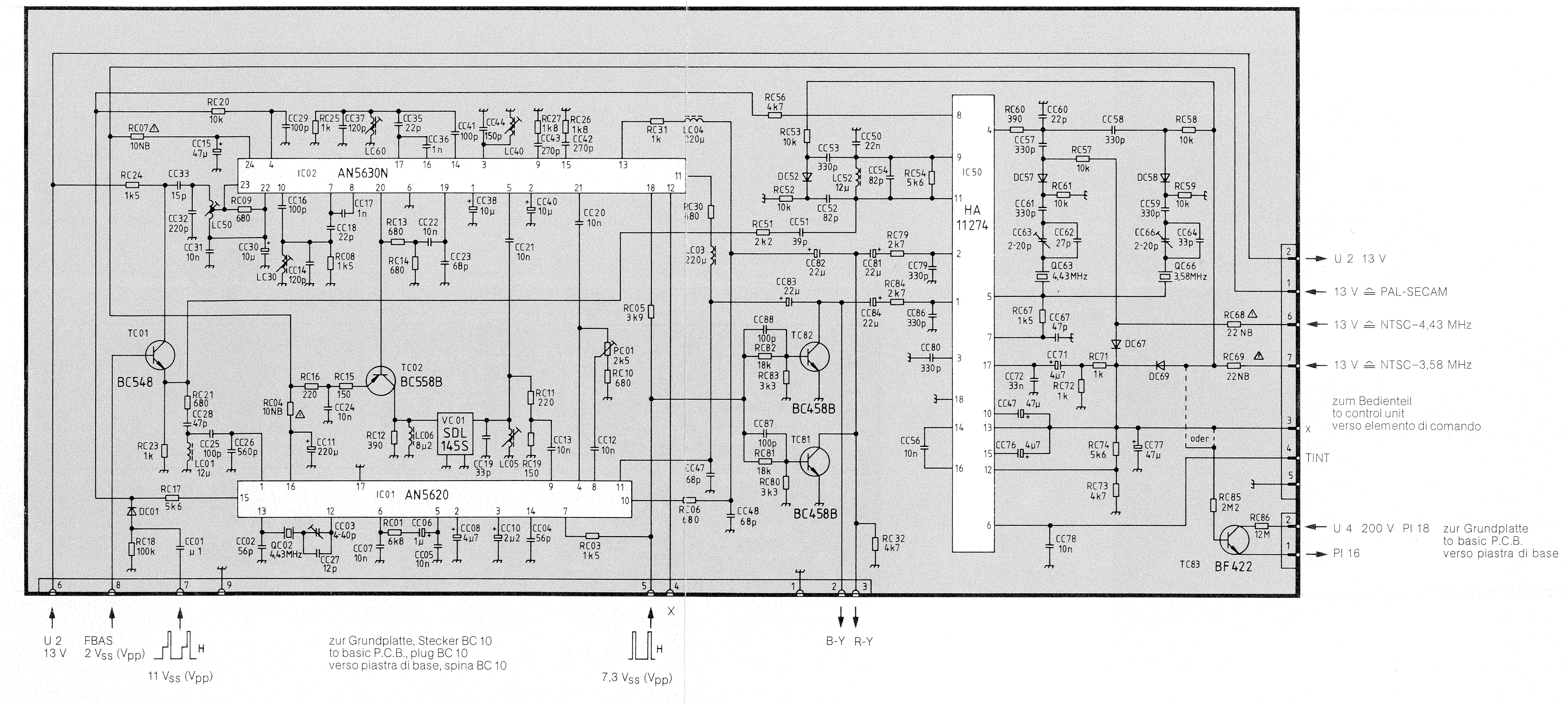
IS 08 TA 7630 P

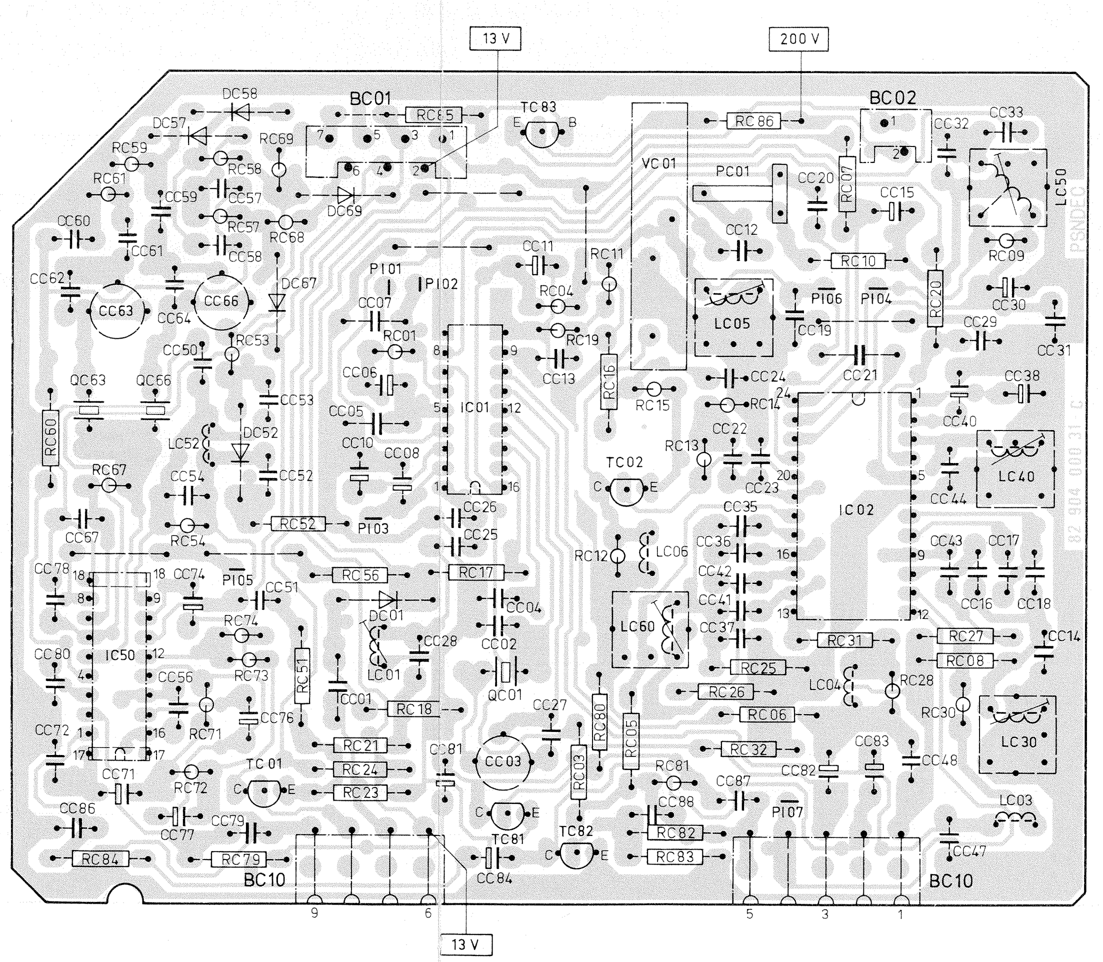

6 8 7 9 10
5
11
control
2
16
15


13 V
13 V
BS40
BS42
BS41
IS07
IS06
IS05
IS08
IS04
IS 02
BS31
BS30
TS43
TS52
QS12
LS 11
DS22
DS62
BS01
BS02
1 3 5 8
17 18 19 20 21
13 V
82 906 400 31-0
STSM-3

Ton-ZF-Modul
Sound IF module **560.789.6**
Modulo FI tono
Lötseite — Soldered side — Lato saldature

PAL-SECAM-NTSC-Decoder
Decoder PAL-SECAM-NTSC 592.677


AN5630N
IC02
HA 11274
IC50
AN5620
IC01
SDL 1455
VC01
BC548
TC01
BC558B
TC02
BC458B
TC82
BC458B
TC81
BF422
TC83
U 2 13 V
13 V ≙ PAL-SECAM
13 V ≙ NTSC-4,43 MHz
13 V ≙ NTSC-3,58 MHz
zum Bedienteil
to control unit
verso elemento di comando
X
TINT
U 4 200 V PI 18
PI 16
zur Grundplatte
to basic P.C.B.
verso piastra di base
U 2
13 V
FBAS
2 Vss (Vpp)
H
11 Vss (Vpp)
zur Grundplatte, Stecker BC 10
to basic P.C.B., plug BC 10
verso piastra di base, spina BC 10
H
7,3 Vss (Vpp)
X
B-Y
R-Y


13 V
200 V
BC01
BC02
TC83
IC01
IC02
IC50
TC01
TC02
TC81
TC82
LC05
LC40
LC60
LC30
LC03
LC50
CC63
CC66
QC63
QC66
QC01
CC03
BC10
BC10
9
6
5
3
1
13 V

Leiterplatte PAL-SECAM-NTSC-Decoder
P.C.B. PAL-SECAM-NTSC-decoder 592.677
Piastra decoder PAL-SECAM-NTSC
Lötseite – Soldered side – Lato saldature

Modulliste – Module list – Lista

Gerätename Model Modello	Typen-Nr. Model nr. No. del tipo
SC 1437	983.540.J
Color 3437 Color 3437-3-D Color 3437-VT Color 3457	983.543.A 983.543.D 983.544.A 983.545.A/J
Color 3532 Color 3537 Color 3547	984.532.J 984.543.J 984.545.A
Color 5532 Stereo Color 5537 Stereo Color 5547 Stereo Color 5557 Stereo	984.538.A 984.552.A 984.553.A 984.547.A
Color 5572 Color 5577	984.539.J 984.551.J
Color 3537-PSN Color 5577-PSN Spectra 8467-PSN	984.544.B 984.554.B 984.559.B
Color B-6417	983.549.J
Color 4430 Color 4432 Color 4437 Color 5472 Color 5477 Spectra 8360 Spectra 8370 Spectra 8472 Spectra 8477 Color TPX 2436	983.517.J 983.521.J 983.546.J 983.538.J 983.552.J 983.523.J 983.524.J 984.536.J 984.558.J 983.570.J
Spectra 8362 Spectra 8367 Spectra 8372 Spectra 8377	983.528.J 983.562.J 983.535.J 983.557.J
Color 5430 Stereo Color 5432 Stereo Color 5437 Stereo Color 5437-3-D Stereo Color 5457 Stereo Spectra 8330 Stereo Spectra 8427 Stereo Spectra 8432 Stereo Spectra 8437 Stereo Spectra 9537 Stereo	983.552.A 983.538.A 983.552.A 983.552.D 983.547.A 983.524.A 984.562.A 984.535.A 984.557.A 984.560.A
Spectra 8327 Stereo Spectra 8332 Stereo Spectra 8337 Stereo Spectra 8337-3-D Stereo Spectra 8342 Stereo Spectra 8347 Stereo Spectra 9432 Stereo Spectra 9437 Stereo	983.562.A 983.535.A 983.557.A 983.557.D 983.539.A 983.559.A 983.531.A 983.560.A
Color Bisonic 2436	983.574.J
Color Stereosonic 2436	984.574.A

Die mit ● gekennzeichneten Module sind in dieser Ergä
die übrigen Module enthält das Chassisbuch F 11.

Modules marked by a ● are illustrated in this supplemen
other modules will be found in the F 11 chassis manual.

I moduli contrassegnati di un ● verranno illustrati in que
supplemento, mentre gli altri moduli sono descritti nel m
telaio F 11.

Modulliste – Module list – Lista moduli FFS Chassis F 11

Gerätename Model Modello	Typen-Nr. Model nr. No. del tipo	Bedienteilsystem System control unit Sistema elemento di comando	Chassis-Nr. Chassis nr. No. del telaio	Leiterplatte, kpl., Netzteil P.C.B., cpl., power unit Piastra, cpl., di rete	HF-Block, kpl. RF block, cpl. Modulo AF, cpl.	Ton-ZF-Modul Sound-IF-module Modulo FI-audio	Leiterplatte, kpl. Ton-Endstufe P.C.B., cpl., power amplifier Piastra, cpl., amplificatore finale	PAL-Decoder-Modul PAL-Decoder-module Modulo PAL-decoder	Bildrohranschluß-Platine, kpl. P.C.B., cpl., CRT socket Piastra, cpl., zoccolo cinescopio
SC 1437	983.540.J	16-Tasten-Bedienteil 16 buttons control unit Elemento di comando a 16 tasti	783.520.B 00 69	592.808	563.794 MTS 2000	592.650	–	592.675	592.653
			783.534.B 00 49	592.808	563.794 MTS 2000	592.650	–	592.651	592.653
Color 3437 Color 3437-3-D Color 3437-VT Color 3457	983.543.A 983.543.D 983.544.A 983.545.A/J	telecontrol 2102	783.520.B 00 69	592.808	563.794 MTS 2000	592.650	–	592.675	592.653
Color 3532 Color 3537 Color 3547	984.532.J 984.543.J 984.545.A	telecontrol 2239	783.548.B 00 88	592.620 ●	563.799 MTS 2004-S ●	592.650	–	592.675	592.653
Color 5532 Stereo Color 5537 Stereo Color 5547 Stereo Color 5557 Stereo	984.538.A 984.552.A 984.553.A 984.547.A	telecontrol 2239	783.556.B 00 91	592.808	563.796 MTS 2020-S	592.841 ●	–	592.675	592.653
Color 5572 Color 5577	984.539.J 984.551.J	telecontrol 2239	783.530.B 00 58	592.808	563.796 MTS 2020-S	592.672	–	592.675	592.653
Color 3537-PSN Color 5577-PSN Spectra 8467-PSN	984.544.B 984.554.B 984.559.B	telecontrol 2239	783.560.B 00 94	592.701 ● LP 115/230 V Umschaltung P.C.B. 115/230 V switch-over Piastra commutazione 115/230 V 592.702 ●	563.799 MTS 2004-S ●	592.650	–	592.677 ● (PAL-SECAM-NTSC)	592.653
Color B-6417	983.549.J	telecontrol 2336	783.527.B 00 52	592.808	563.796 MTS 2020-S	592.650	–	592.651	592.653
Color 4430 Color 4432 Color 4437 Color 5472 Color 5477 Spectra 8360 Spectra 8370 Spectra 8472 Spectra 8477 Color TPX 2436	983.517.J 983.521.J 983.546.J 983.538.J 983.552.J 983.523.J 983.524.J 984.536.J 984.558.J 983.570.J	telecontrol 2436	783.530.B 00 58	592.808	563.796 MTS 2020-S	592.672	–	592.675	592.653
Spectra 8362 Spectra 8367 Spectra 8372 Spectra 8377	983.528.J 983.562.J 983.535.J 983.557.J	telecontrol 2436	783.539.B 00 77	592.660	563.796. MTS 2020-S	592.672	592.664 (12 W)	592.675	592.653
Color 5430 Stereo Color 5432 Stereo Color 5437 Stereo Color 5437-3-D Stereo Color 5457 Stereo Spectra 8330 Stereo Spectra 8427 Stereo Spectra 8432 Stereo Spectra 8437 Stereo Spectra 9537 Stereo	983.552.A 983.538.A 983.552.A 983.552.D 983.547.A 983.524.A 984.562.A 984.535.A 984.557.A 984.560.A	telecontrol 2436	783.525.B 00 70	592.808	563.796 MTS 2020-S	592.684 ●	–	592.675	592.653
Spectra 8327 Stereo Spectra 8332 Stereo Spectra 8337 Stereo Spectra 8337-3-D Stereo Spectra 8342 Stereo Spectra 8347 Stereo Spectra 9432 Stereo Spectra 9437 Stereo	983.562.A 983.535.A 983.557.A 983.557.D 983.539.A 983.559.A 983.531.A 983.560.A	telecontrol 2436	783.528.B 00 71	592.660	563.796 MTS 2020-S	592.684 ●	592.664 (12 W)	592.675	592.653
Color Bisonic 2436	983.574.J	telecontrol 2436	783.533.B 00 74	592.823 ●	563.796 MTS 2020-S	560.789.6 ●	592.688 (2 x 25 W) ●	592.675	592.653
Color Stereosonic 2436	984.574.A	telecontrol 2436	783.544.B 00 82	592.823 ●	563.796 MTS 2020-S	592.684 ●	592.688 (2 x 25 W) ●	592.675	592.653

Die mit ● gekennzeichneten Module sind in dieser Ergänzung abgebildet, die übrigen Module enthält das Chassisbuch F 11.

Modules marked by a ● are illustrated in this supplement, whilst the other modules will be found in the F 11 chassis manual.

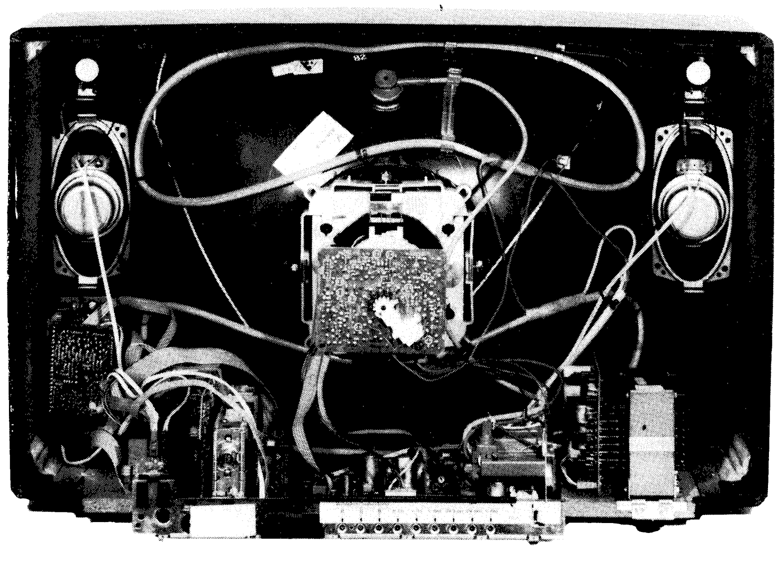
I moduli contrassegnati di un ● verranno illustrati in questo supplemento, mentre gli altri moduli sono descritti nel manuale del telaio F 11.

NORDMENDE

Änderungen vorbehalten · Modification rights reserved · Con riserva di modifiche · NORDMENDE Vertriebs-GmbH & Co. OHG · Postfach 44 8508 · 2800 Bremen 44

TECHNISCHER KUNDENDIENST

Service-Information



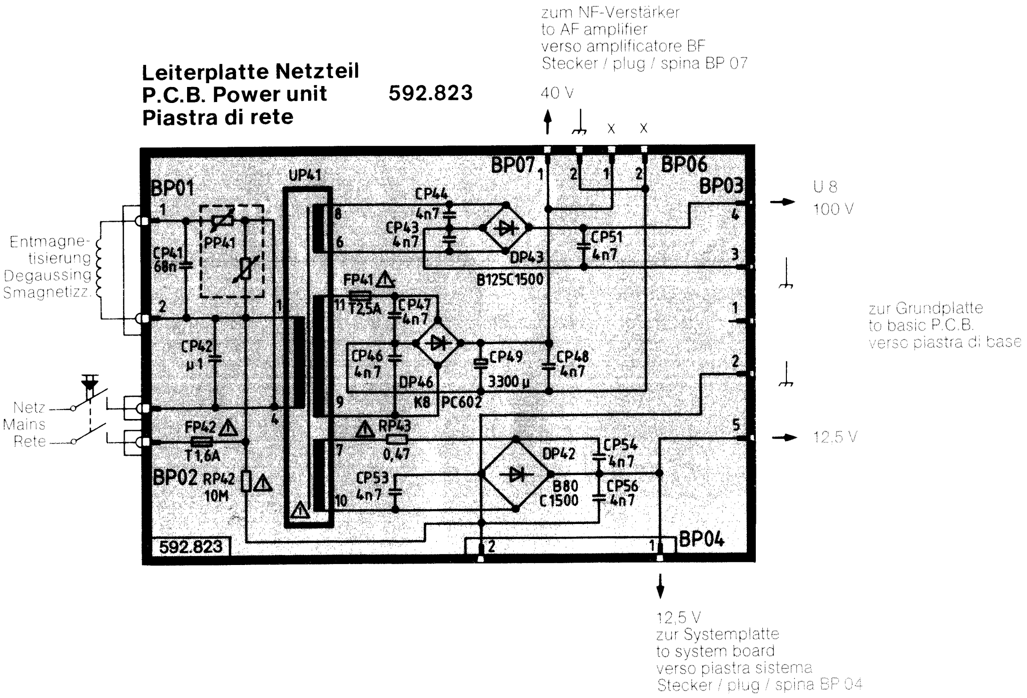
FFS-Chassis F 11

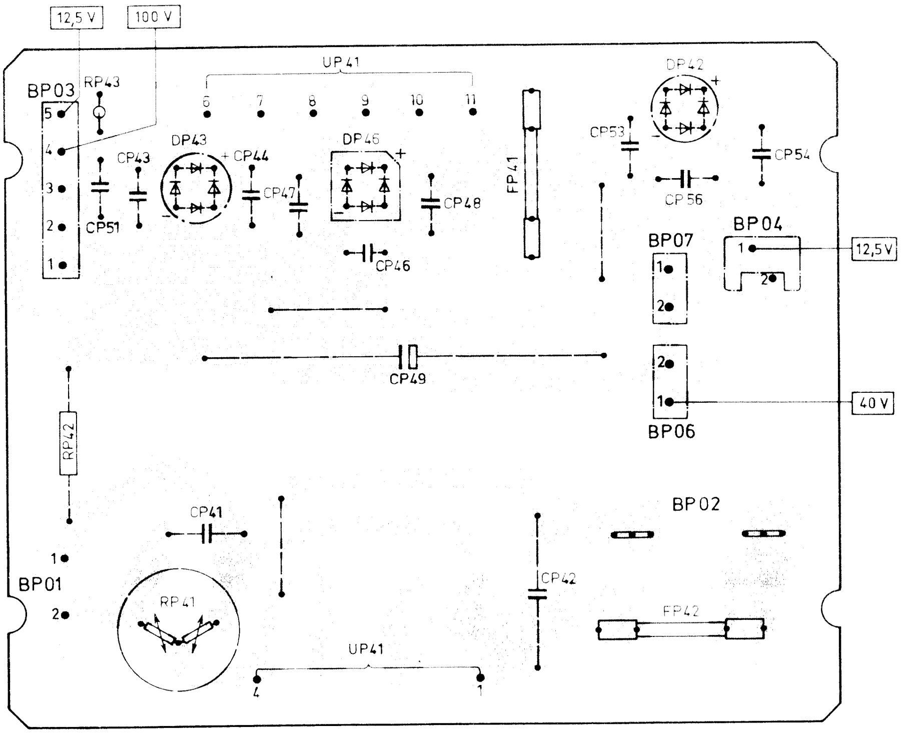
Ergänzung zum Chassisbuch F 11
Supplement to F 11 chassis manual
Supplemento al manuale del telaio F 11

NORDMENDE

Diese Angaben und Hinweise sind ausschließlich für den Service des Fachhändlers bestimmt · Änderungen vorbehalten · These instructions are for service dealers only · Subject to modification · Questi dati e queste istruzioni sono riservati ai tecnici del servizio assistenza · Con riserva di modifiche

Leiterplatte Netzteil
P.C.B. Power unit 592.823
Piastra di rete


zum NF-Verstärker
to AF amplifier
verso amplificatore BF
Stecker / plug / spina BP 07
40 V
x
x
BP07
BP06
BP03
BP01
BP02
BP04
UP41
CP44 4n7
CP43 4n7
CP51 4n7
DP43
B125C1500
FP41 T25A
CP47 4n7
CP46 4n7
DP46
K8 PC602
CP49 3300 µ
CP48 4n7
PP41
CP41 68n
CP42 µ1
FP42 T1,6A
RP42 10M
RP43 0,47
CP53 4n7
DP42
B80 C1500
CP54 4n7
CP56 4n7
592.823
Entmagnetisierung
Degaussing
Smagnetizz
Netz
Mains
Rete
U 8
100 V
zur Grundplatte
to basic P.C.B.
verso piastra di base
12,5 V
12,5 V
zur Systemplatte
to system board
verso piastra sistema
Stecker / plug / spina BP 04


12,5 V
100 V
BP03
RP43
UP41
DP43
CP43
CP44
CP47
DP46
CP48
CP51
CP46
FP41
DP42
CP53
CP54
CP56
BP07
BP04
12,5 V
CP49
BP06
40 V
RP42
CP41
BP01
RP41
UP41
CP42
BP02
FP42

Leiterplatte Netzteil
P.C.B. Power unit 592.823
Piastra di rete

Lötseite – Soldered side – Lato saldature

Vom Zeilentrafo gelangen positive Zeilenimpulse über RP 06 an die Basis des TP 04. Der Transistor wird während des negativen Zeilenhinlaufanteils gesperrt und in der Rücklaufphase leitend. Demzufolge liegt am Kollektor des TP 04 ein zeilenfrequenter Sägezahn als Ansteuersignal für TP 06. CP 12 wird während der Horizontal-Rücklaufphase von TP 04 entladen.

Bei Erreichen der Schwellspannung schalten TP 06 und TP 02 durch, womit auch TP 01 leitend wird und einen sägezahnförmigen Strom über RP 03 nach Masse fließen läßt. Mit diesem Strom sammelt die Ladespule LP 01 magnetische Energie.

Vom Zeilentrafoanschluß 11 wird über DP 43, DP 42 und RP 05 an die Basis des TP 01 der negative Zeilenrücklaufimpuls zugeführt, der diesen sperrt. Das zusammenbrechende magnetische Feld der LP 01 erzeugt eine Spannungsüberhöhung, die DP 14 in den leitenden Zustand versetzt und CP 14 auflädt. Die mit PP 01 einstellbare Spannung dient als Referenz für die Steuerung des Energiehaushaltes im Gerät. DP 10, RP 08 und CP 23 bedämpfen die beim Abschalten des TP 01 entstehende Spannungspitze.

Regelkreis

Die Betriebsspannung +1 wird über den Spannungsteiler RP 11, PP 01, RP 09 der Basis des TP 05 zugeführt. Am Emitter des Transistors stehen im eingeschwungenen Betriebszustand 6,2 V, die durch DP 20 stabilisiert von +2a über die Entkopplungsdiode DP 15, TP 21 und RP 25 abgeleitet werden. TP 05 ist also als Stromquelle für das sägezahnförmige RC-Glied RP 23, CP 12 anzusehen. Je nach Innenwiderstand des TP 05 verringert oder erhöht sich die Steilheit der Sägezahnspannung an TP 06. Der Schaltpunkt des Transistors kann damit zeitlich vor- oder zurückverlegt werden. Über TP 02 wird also TP 01, je nach Energiebedarf innerhalb des Zeilenhinlaufes früher oder später leitend. Damit wird die Stärke des magnetischen Feldes in LP 01 gesteuert.

Beispiel:
Bei erhöhtem Leistungsbedarf des Gerätes sinkt die Betriebsspannung +1 leicht ab. Demzufolge verringert sich auch die Basisspannung an TP 05. Diese wird niederohmiger und sorgt für eine schnellere Aufladung von CP 12. Durch die steilere Sägezahnspannung schalten TP 06, TP 02 und TP 01 früher in den leitenden Zustand. Die Ladespule kann mehr Energie sammeln und diese nach Abschalten des TP 01 über die Speisediode DP 14 an den Ladekondensator CP 14 abgeben. Die Spannung steigt wieder auf ihren Sollwert an.

Schutzschaltungen im geregelten Netzteil

1. Steigt z. B. durch Fehleinstellung von PP 01 oder bei einem Vertikalausfall die Betriebsspannung +1 unzulässig hoch an, so erhöht sich auch die Sekundärbetriebsspannung +3, 23,5 V. Die Z-Spannung von DP 18 wird überschritten. TP 18 wird leitend und TP 21 sperrt. Damit ist die H-Ablenkung und das geregelte Netzteil außer Betrieb. Nach Absinken der Spannung +3 und Entladung von CP 21 über RP 21, schaltet TP 21 durch und setzt die H-Ablenkung sowie das geregelte Netzteil erneut in Betrieb. Der Schaltzyklus ist durch die Zeitkonstante des RC-Gliedes RP 21, CP 21 bestimmt.
2. Steigt die Leistungsaufnahme des Gerätes unzulässig hoch an, so würde TP 01 überlastet. An RP 03 entsteht ein dem Strom durch TP 01 entsprechender Spannungsabfall, der über DP 17 und RP 04 den Transistor TP 04 durchschaltet. TP 01 wird also über TP 06, TP 02 ebenfalls gesperrt und damit gegen zu hohe Stromaufnahme geschützt.

From the line transformer positive horizontal pulses reach the base of TP 04 through RP 06. The transistor is blocked during the negative line sweep phase and is conductive during the flyback phase. As a result a line-frequency sawtooth is present at the collector of TP 04 as a triggering signal for TP 06. CP 12 is discharged by TP 04 during the horizontal flyback phase.

When threshold voltage is reached, TP 06 and TP 02 switch through, whereby TP 01 also becomes conductive, allowing a sawtooth current to flow to ground through RP 03. With this current the LP 01 charging coil collects magnetic energy.

From terminal 11 of the line transformer the negative line flyback pulse is supplied through DP 43, DP 42 and RP 05 to the basis of TP 01, which blocks. As the magnetic field of LP 01 collapses it generates an elevated voltage which makes DP 14 conductive and charges CP 14. The voltage adjustable at PP 01 serves as a reference for the control of the energy requirements in the receiver. DP 10, RP 08 and CP 23 damp the voltage peaks created when TP 01 switches out.

Control circuit

Operation voltage +1 is supplied to the base of TP 05 through voltage splitter RP 11, PP 01 and RP 09. When in a steady state 6,2 V are available at the emitter of the transistor, which – stabilized by +2a – are drained through decoupling diodes DP 15, TP 21 and RP 25. TP 05 is also to be seen as the current source for the RC network, RP 23 and CP 12, which generates the sawtooth. Depending on the internal resistance of TP 05, the steepness of the sawtooth voltage at TP 06 is lowered or elevated. The switching point of the transistor can thus be advanced or retarded. Under the influence of TP 02, TP 01 will become conductive during the line sweep either earlier or later, depending on the energy requirements. Thus the strength of the magnetic field in LP 01 is controlled.

Example:
As the receiver's power requirements increase, operational voltage +1 drops slightly. As a result the base voltage at TP 05 is also reduced. The impedance drops, causing faster charging of CP 12. Due to the steeper sawtooth voltage, TP 06, TP 02 and TP 01 become conductive earlier. The charging coil can collect more energy and, once TP 01 has switched off, discharge the energy through feed diode DP 14 to charging condensor CP 14. Voltage again rises to its rescribed value.

Protective circuits in the controlled line section

1. If due to faulty adjustment of PP 01, for example, or in case operational voltage +1 becomes inadmissably high due to a failure in the vertical section, secondary operating voltage +3, 23,5 V, also rises. The zener voltage of DP 18 is exceeded TP 18 becomes conductive and TP 21 blocks. Thus the horizontal deflection and the controlled line section are taken out of service. After voltage +3 has dropped and CP 21 has discharged through RP 21, TP 21 switches through, putting the horizontal deflection and the controlled line section back into service. The switching cycle is determined by the time constants of RC network RP 21, CP 21.
2. If the power drawn by the set rises to an unacceptable level, TP 01 is overloaded. At RP 03 a voltage drop is effected which corresponds to the current through TP 01, and this drop switches transistor TP 04 via DP 17 and RP 04. TP 01 is thus also blocked by TP 06 and TP 02, and as a result protected against excessive power requirements.

Dal trasformatore di riga tramite RP 06 arrivano impulsi di riga positivi alla base del TP 04. Il transistor è in interdizione durante la componente negativa dell'andata di riga, ed è in conduzione durante la fase di ritorno. Di conseguenza al collettore del TP 04 risulta un dente di sega a frequenza di riga come segnale di pilotaggio per il TP 06. CP 12 viene scaricato dal TP 04 durante la fase di ritorno orizzontale.

A raggiungimento della tensione soglia, TP 06 e TP 02 vanno in conduzione, con ciò va in conduzione anche TP 01 e lascia fluire una corrente a dente di sega attraverso RP 03 verso massa. Con questa corrente la bobina di carica LP 01, accumula energia magnetica.

Dal trasformatore di riga contatto 11, tramite DP 43, DP 42 e RP 05, viene portato l'impulso negativo ritorno di riga alla base del TP 01, che lo mette in interdizione. Il campo magnetico in crollo nella LP 01 produce sovraelevazione di tensione che mette in conduzione il DP 14 e ricarica il CP 14. La tensione regolabile con PP 01 serve come riferimento per il pilotaggio del fabbisogno di energia nell'apparecchio. DP 10, RP 08 e CP 23 attenuano il picco di tensione che nasce con lo spegnimento del TP 01.

Circuito di regolazione

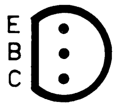
La tensione di lavoro +1 viene portata alla base del TP 05 attraverso il partitore di tensione RP 11, PP 01, RP 09. All'emitter del transistor, nella condizione eccitata, risultano 6,2 V, che vengono stabilizzati dal DP 20 ed escono da +2a attraverso il diodo di disaccoppiamento DP 15, TP 21 e RP 25. TP 05 è perciò da considerarsi quale fonte di corrente per il circuito RC-RP 23, CP 12 che produce il dente di sega. Conforme alla resistenza interna del TP 05 diminuisce o aumenta la ripidezza della tensione dente di sega al TP 06. Il punto di commutazione del transistor con ciò può essere anticipato o posticipato nel tempo. Attraverso TP 02 il TP 01 viene, conforme alle esigenza di energia, messo in conduzione prima o dopo il periodo dell'andata di riga. Con ciò viene pilotata l'intensità del campo magnetico nella LP 01.

Esempio:
Con aumentato fabbisogno di potenza dell'apparecchio la tensione di lavoro +1 cala leggermente. Di conseguenza si riduce anche la tensione alla base del TP 05. La sua resistenza ohmica si abbassa e provoca una più veloce ricarica del CP 12. Per la tensione dente di sega più ripida TP 06, TP 02 e TP 01 vanno in conduzione con anticipo. La bobina di carica può accumulare più energia e scaricarla, dopo l'interdizione del TP 01, attraverso il diodi di alimentazione DP 14 al condensatore di carica CP 14. La tensione accresce nuovamente sul suo valore nominale.

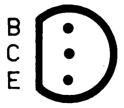
Circuiti di protezione nell'alimentatore regolato

1. Accresce, p.es., per regolazione errata del PP 01 oppure con mancanza verticale, la tensione di lavoro +1 su valori inammissibili, come conseguenza aumenta anche la tensione secondaria +3 di 23,5 V. La tensione Z del DP 18 viene oltrepassata TP 18 è in conduzione e TP 21 va in interdizione. Con ciò la deflessione orizzontale e l'alimentazione regolata sono fuori servizio. Dopo la diminuzione della tensione +3 e la scarica del CP 21, attraverso RP 21 il TP 21 va in conduzione e mette nuovamente in funzione la deflessione orizzontale e l'alimentatore regolato. Il ciclo di commutazione è determinato dalla costante di tempo del circuito RC-RP 21, CP 21.
2. Se l'assorbimento di potenza dell'apparecchio aumenta in maniera inammissibile il TP 01 verrebbe sovraccaricato. Sulla RP 03 nasce una caduta di tensione rispettiva alla corrente che attraverso il TP 01, la quale mette in conduzione il TP 04 tramite DP 17 e RP 04. TP 01 viene altrettanto messo in interdizione attraverso TP 06, il TP 02 è perciò protetto contro assorbimento troppo alto di corrente.

Sockelschaltungen – Socket connections – Circuiti a zoccolo



BC 328-40
BC 546 B
BC 547 B
BC 548/A/B/C
BC 556 A
BC 557 B
BC 558 A/B



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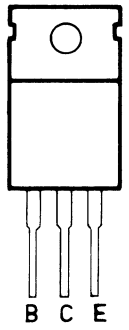
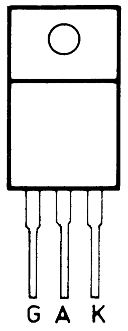
BF 422
BF 423



BDX 53 A
BDX 54 A



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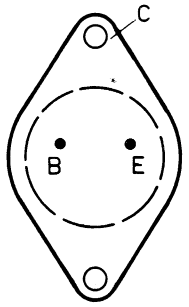

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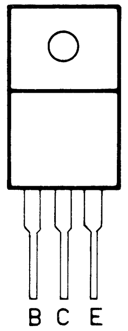

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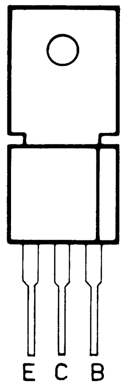
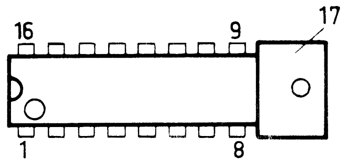


S 671



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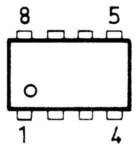

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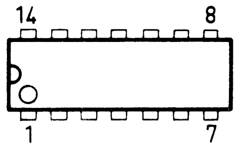

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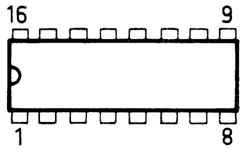

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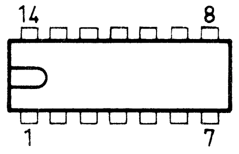
TA7630P



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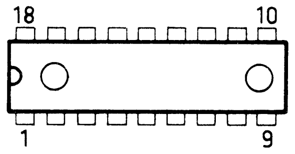

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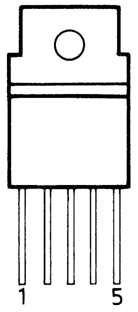

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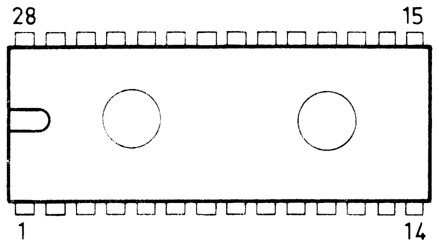

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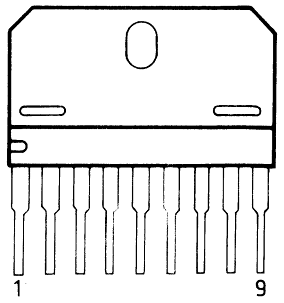

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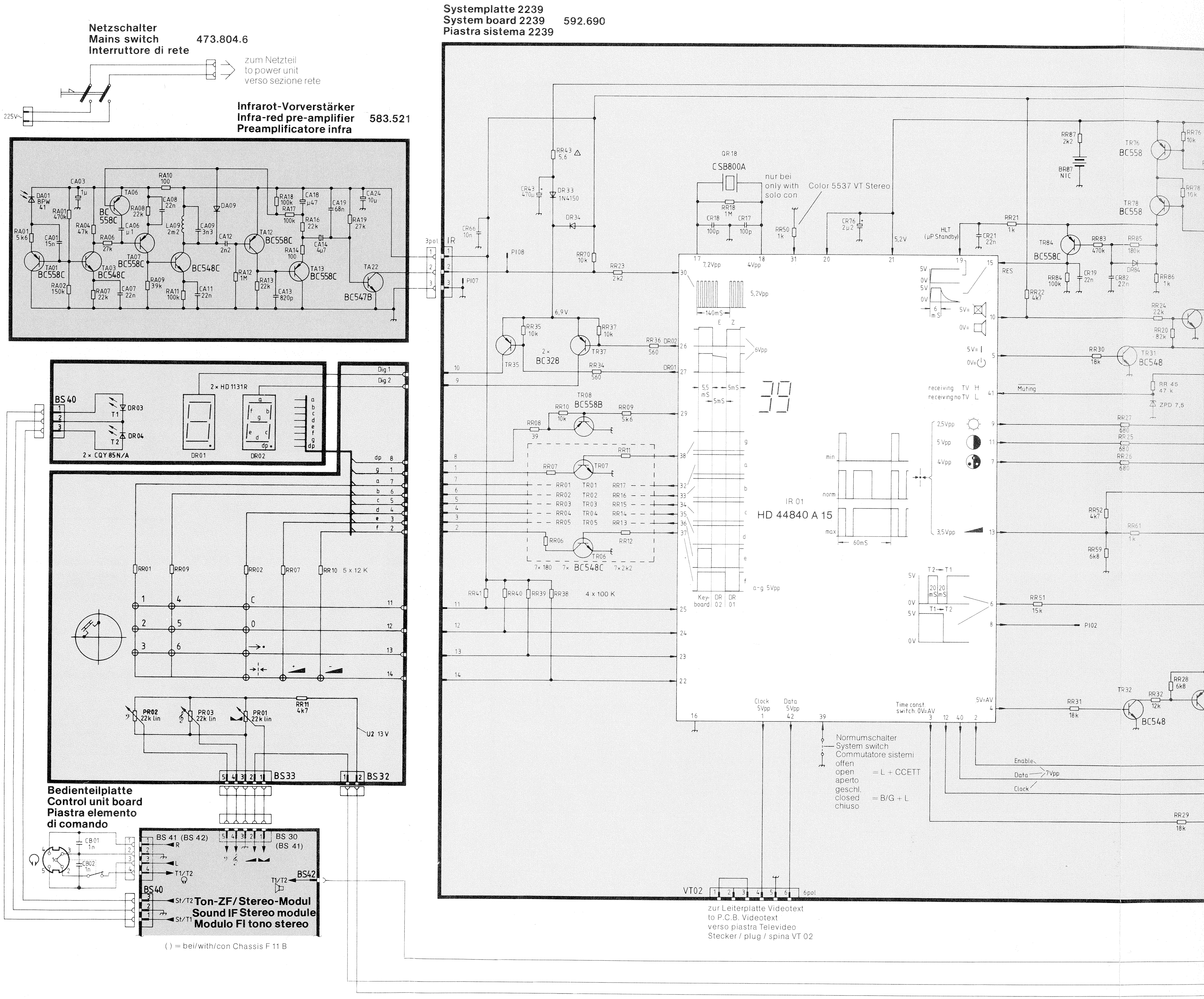
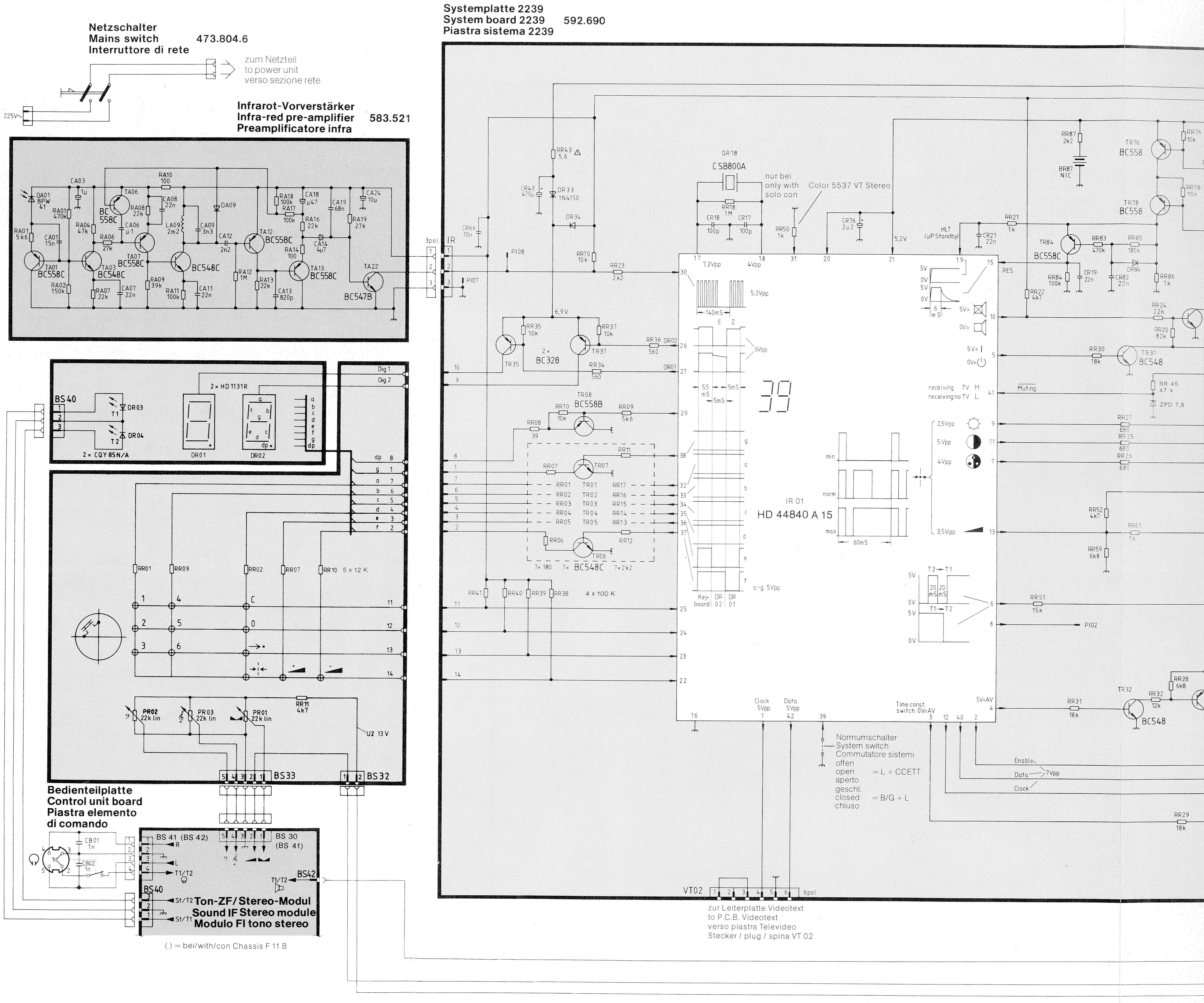

Netzschalter
Mains switch 473.804.6
Interruttore di rete
zum Netzteil
to power unit
verso sezione rete
225V~
Infrarot-Vorverstärker
Infra-red pre-amplifier 583.521
Preamplificatore infra
Systemplatte 2239
System board 2239 592.690
Piastra sistema 2239
BS 40
2 × CQY 85N/A
2 × HD 1131R
DR01
DR02
QR18
CSB800A
nur bei
only with
solo con
Color 5537 VT Stereo
IR 01
HD 44840 A 15
HLT
(µP Standby)
Muting
receiving TV H
receiving no TV L
Normumschalter
System switch
Commutatore sistemi
offen
open = L + CCETT
aperto
geschl.
closed = B/G + L
chiuso
Enable
Data 7Vpp
Clock
Clock 5Vpp
Data 5Vpp
Time const. switch 0V=AV
VT02
6pol
zur Leiterplatte Videotext
to P.C.B. Videotext
verso piastra Televideo
Stecker / plug / spina VT 02
RR10 5 x 12 K
4 x 100 K
U2 13 V
BS33
BS32
Bedienteilplatte
Control unit board
Piastra elemento
di comando
BS 41 (BS 42)
BS 30
(BS 41)
BS42
BS40
Ton-ZF/Stereo-Modul
Sound IF Stereo module
Modulo FI tono stereo
( ) = bei/with/con Chassis F 11 B

Bedienteil
Control unit
Elemento di comando
telecontrol 2239
784.581 B

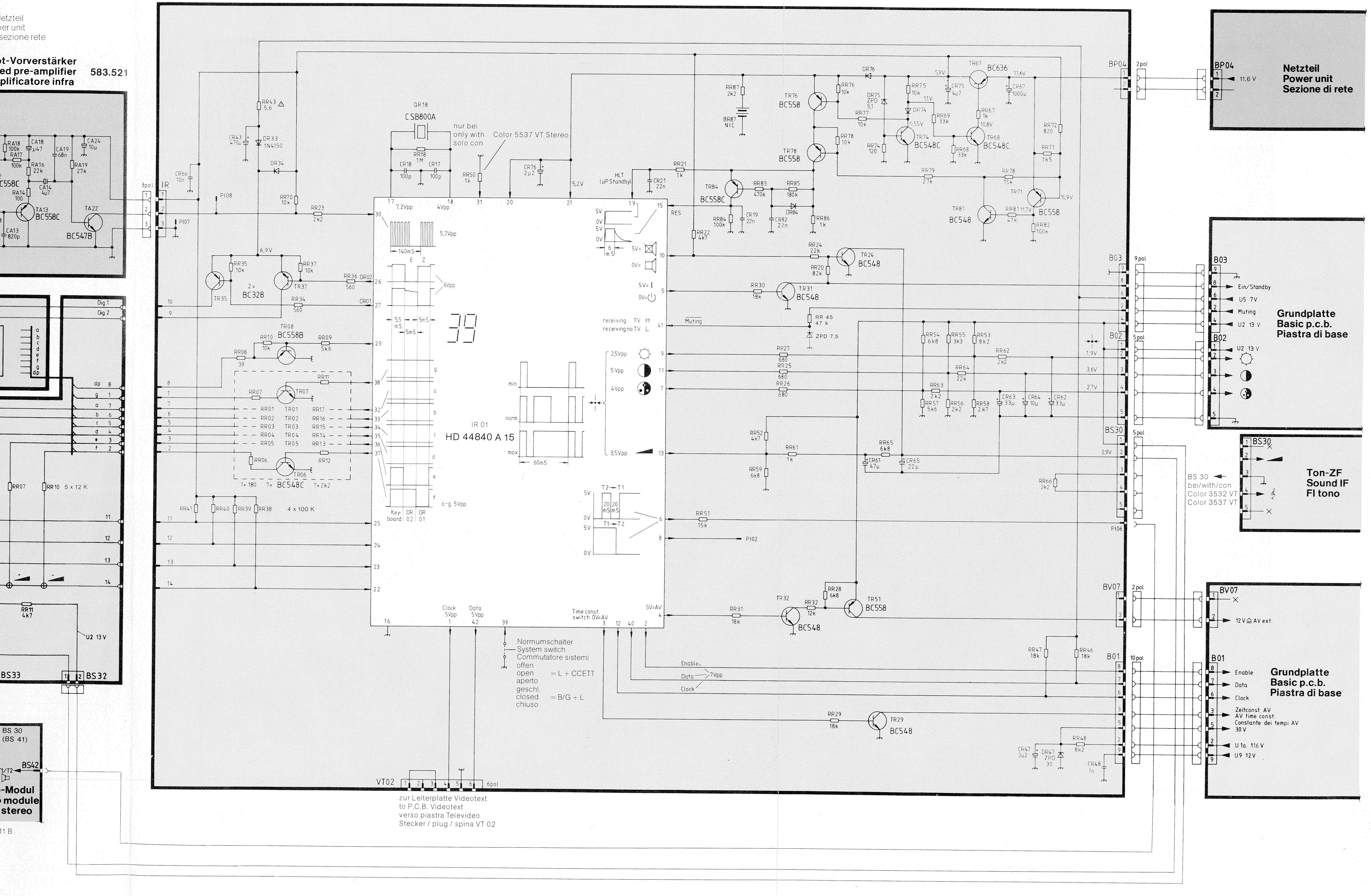
NORDMENDE


Netzschalter
Mains switch
Interruttore di rete
473.804.6
zum Netzteil
to power unit
verso sezione rete
225V~
Infrarot-Vorverstärker
Infra-red pre-amplifier
Preamplificatore infra
583.521
Systemplatte 2239
System board 2239
Piastra sistema 2239
592.690
DA01 BPW 41
TA01 BC558C
TA03 BC548C
TA06 BC558C
TA07 BC558C
TA12 BC558C
TA13 BC558C
TA22 BC547B
3pol IR
BS40
2 × CQY 85N/A
2 × HD 1131R
DR01
DR02
DR03
DR04
QR18 CSB800A
nur bei only with solo con
Color 5537 VT Stereo
HLT (µP Standby)
TR76 BC558
TR78 BC558
TR84 BC558C
TR31 BC548
TR32 BC548
TR35
TR37
2 × BC328
TR08 BC558B
7 × 180
7 × BC548C
7 × 2k2
IR 01
HD 44840 A 15
Key-board
receiving TV H
receiving no TV L
Muting
RES
Time const. switch 0V=AV
Clock 5Vpp
Data 5Vpp
Normumschalter
System switch
Commutatore sistemi
offen open aperto = L + CCETT
geschl. closed chiuso = B/G + L
Enable
Data 7Vpp
Clock
VT02
6pol
zur Leiterplatte Videotext
to P.C.B. Videotext
verso piastra Televideo
Stecker / plug / spina VT 02
PR02 22k lin
PR03 22k lin
PR01 22k lin
RR11 4k7
U2 13V
BS33
BS32
Bedienteilplatte
Control unit board
Piastra elemento di comando
BS 41 (BS 42)
BS 30 (BS 41)
BS42
BS40
Ton-ZF/Stereo-Modul
Sound IF Stereo module
Modulo FI tono stereo
( ) = bei/with/con Chassis F 11 B

Bedienteil
Control unit
Elemento di comando
telecontrol 2239
784.581 B

NORDMENDE

Systemplatte 2239
System board 2239 592.690
Piastra sistema 2239

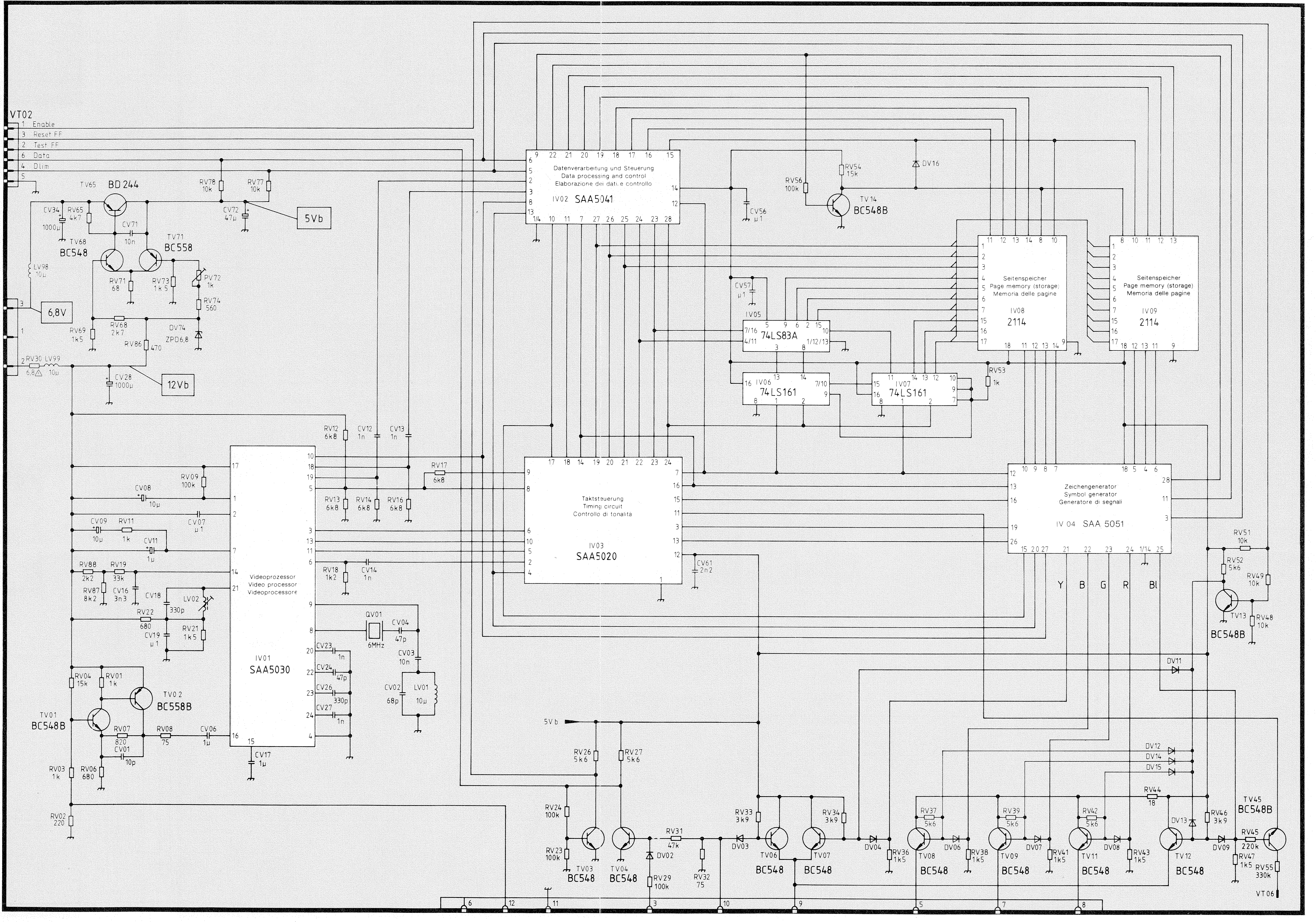


Netzteil
Power unit
Sezione di rete
Infrarot-Vorverstärker
Infrared pre-amplifier
Preamplificatore infra
583.521
IR 01
HD 44840 A 15
QR 18
CSB800A
nur bei
only with
solo con
Color 5537 VT Stereo
BP04
2pol
11,6 V
Netzteil
Power unit
Sezione di rete
B03
9pol
Ein/Standby
U5 7V
Muting
U2 13 V
Grundplatte
Basic p.c.b.
Piastra di base
B02
5pol
BS30
Ton-ZF
Sound IF
FI tono
BS 30
bei/with/con
Color 3532 VT
Color 3537 VT
BV07
12 V ≙ AV ext.
B01
10pol
Enable
Data
Clock
Zeitconst. AV
AV time const.
Constante dei tempi AV
30 V
U 1a 116 V
U9 12V
Grundplatte
Basic p.c.b.
Piastra di base
Normumschalter
System switch
Commutatore sistemi
offen
open
aperto
= L + CCETT
geschl.
closed
chiuso
= B/G + L
VT02
6pol
zur Leiterplatte Videotext
to P.C.B. Videotext
verso piastra Televideo
Stecker / plug / spina VT 02
TR67 BC636
TR76 BC558
TR78 BC558
TR74 BC548C
TR68 BC548C
TR84 BC558C
TR71 BC558
TR81 BC548
TR24 BC548
TR31 BC548
TR32 BC548
TR51 BC558
TR29 BC548
TR35 TR37 2× BC328
TR08 BC558B
7× BC548C
TA13 BC558C
TA22 BC547B
Key-board
DR 02
DR 01
receiving TV H
receiving no TV L
Muting
HLT (µP Standby)
RES
Clock 5Vpp
Data 5Vpp
Time const. switch: 0V=AV
5V=AV
BS33
BS32
BS42
-Modul
module
stereo

Leiterplatte Videotext
P.C.B. Videotext 592.849
Piastra Televideo

zur Systemplatte
to system board
verso piastra sistema
Stecker / plug /
spina VT 02

zur Grundplatte
to basic p.c.b.
verso piastra
di base
Stecker / plug /
spina BV 05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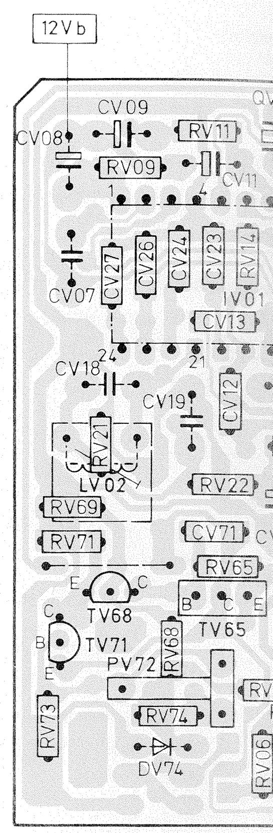
1 Enable
3 Reset FF
2 Test FF
6 Data
4 Dim
5
TV65 BD244
CV34 1000µ
RV65 4k7
CV71 10n
TV68 BC548
TV71 BC558
LV98 10µ
RV71 68
RV73 1k5
PV72 1k
RV74 560
6,8V
RV69 1k5
RV68 2k7
RV86 470
DV74 ZPD6,8
RV30 6,8
LV99 10µ
CV28 1000µ
12Vb
RV78 10k
RV77 10k
CV72 47µ
5Vb
Datenverarbeitung und Steuerung
Data processing and control
Elaborazione dei dati e controllo
IV02 SAA5041
CV56 µ1
RV56 100k
RV54 15k
TV14 BC548B
DV16
CV57 µ1
IV05 74LS83A
IV06 74LS161
IV07 74LS161
RV53 1k
Seitenspeicher
Page memory (storage)
Memoria delle pagine
IV08 2114
IV09 2114
RV12 6k8
CV12 1n
CV13 1n
RV17 6k8
RV13 6k8
RV14 6k8
RV16 6k8
RV18 1k2
CV14 1n
RV09 100k
CV08 10µ
CV09 10µ
RV11 1k
CV07 µ1
CV11 1µ
RV88 2k2
RV19 33k
RV87 8k2
CV16 3n3
CV18 330p
LV02
RV22 680
CV19 µ1
RV21 1k5
Videoprozessor
Video processor
Videoprocessore
IV01 SAA5030
QV01 6MHz
CV04 47p
CV03 10n
CV02 68p
LV01 10µ
CV23 1n
CV24 47p
CV26 330p
CV27 1n
CV17 1µ
RV04 15k
RV01 1k
TV02 BC558B
TV01 BC548B
RV07 820
CV01 10p
RV08 75
CV06 1µ
RV03 1k
RV06 680
RV02 220
Taktsteuerung
Timing circuit
Controllo di tonalita
IV03 SAA5020
CV61 2n2
Zeichengenerator
Symbol generator
Generatore di segnali
IV 04 SAA 5051
Y B G R Bl
RV51 10k
RV52 5k6
RV49 10k
TV13 BC548B
RV48 10k
DV11
DV12
DV14
DV15
5V b
RV26 5k6
RV27 5k6
RV24 100k
RV23 100k
TV03 BC548
TV04 BC548
RV31 47k
DV02
RV29 100k
RV32 75
RV33 3k9
DV03
TV06 BC548
RV34 3k9
TV07 BC548
DV04
RV36 1k5
RV37 5k6
TV08 BC548
DV06
RV38 1k5
RV39 5k6
TV09 BC548
DV07
RV41 1k5
RV42 5k6
TV11 BC548
DV08
RV43 1k5
RV44 18
DV13
TV12 BC548
RV46 3k9
DV09
RV45 220k
RV47 1k5
TV45 BC548B
RV55 330k
VT06
6 12 11 3 10 9 5 7 8

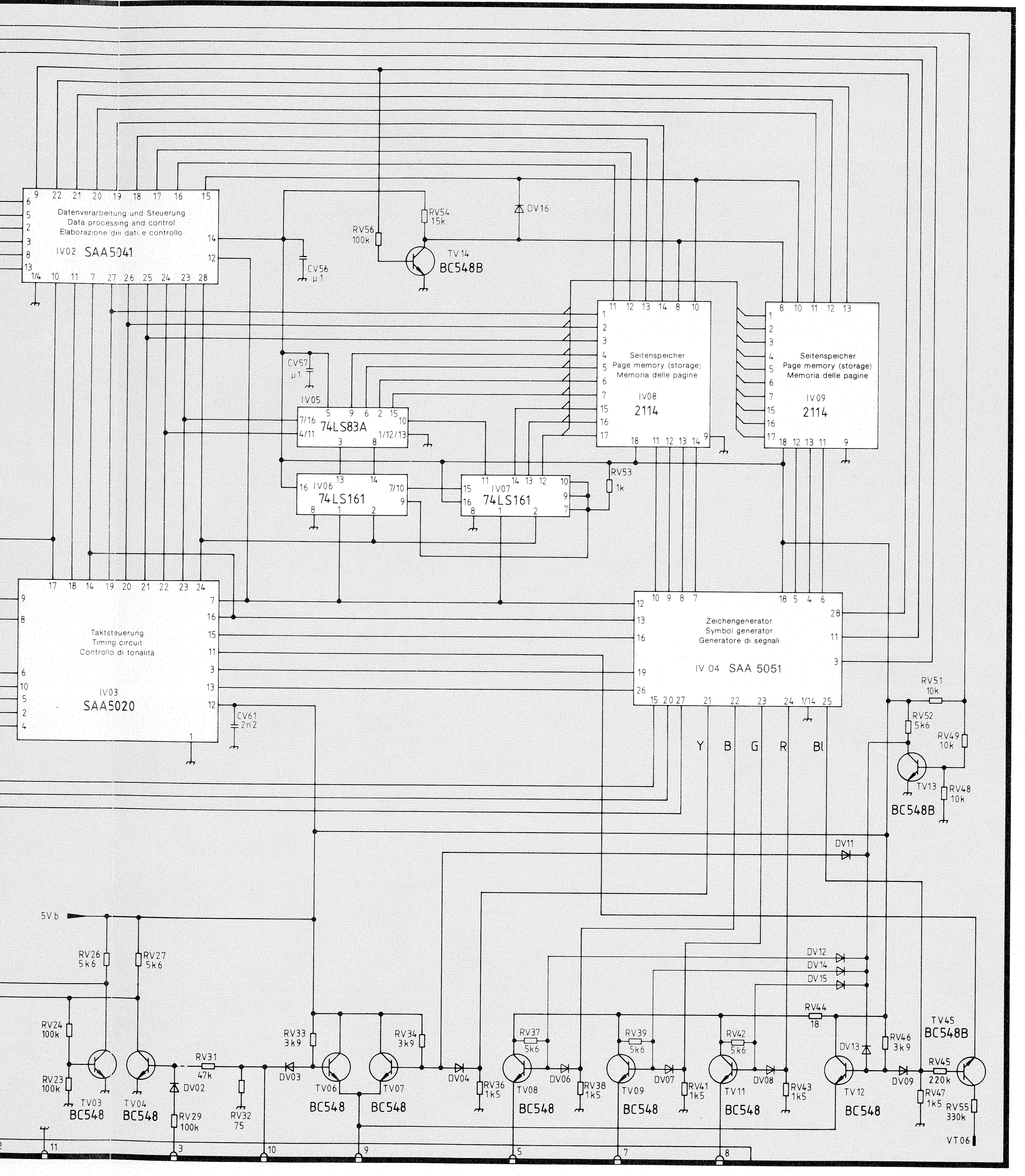
zur Grundplatte, Stecker BV 03
to basic board, plug BV 03
verso piastra di base, spina BV 03

VT 06
zur Grundplatte
to basic p.c.b.
verso piastra di base
Stift / pin / piedino / PI 17/VT 06


12V b
CV09
RV11
CV08
RV09
CV11
CV27
CV26
CV24
CV23
RV14
CV07
IV01
CV13
CV18
CV19
RV21
CV12
LV02
RV22
RV69
RV71
CV71
RV65
TV68
TV71
TV65
PV72
RV68
RV73
RV74
DV74

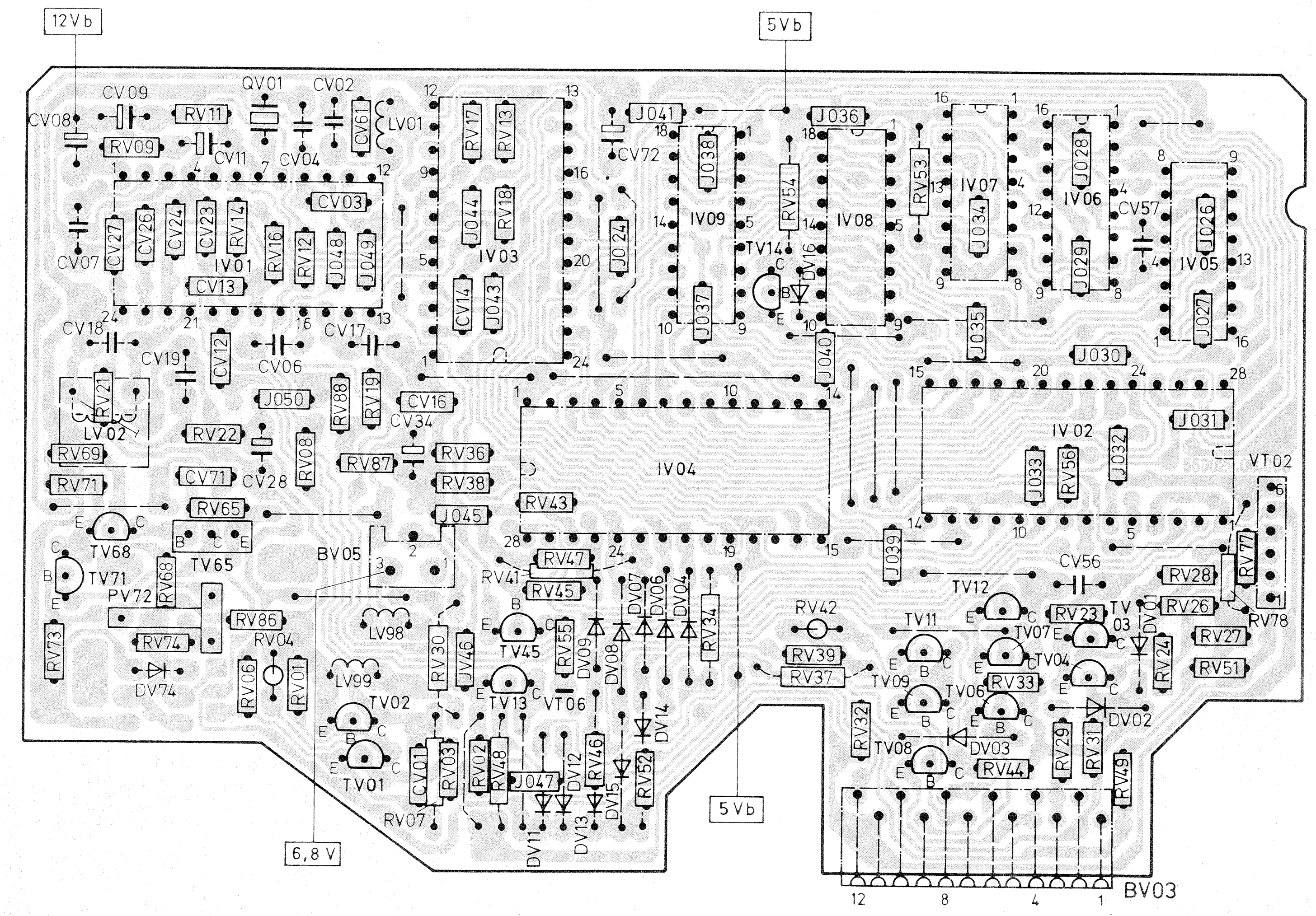
Service-Einstellunge

1. Mit PV 72 4,95 V an
2. Mit LV 02 gegebene
einschreiben einer
Dazu das Antenne
bis Fehler auftrete
Testseite anwählen,
schrieben wird (Sei


Datenverarbeitung und Steuerung
Data processing and control
Elaborazione dei dati e controllo
IV02 SAA5041
RV56 100k
RV54 15k
DV16
TV14 BC548B
CV56
CV57
IV05 74LS83A
IV06 74LS161
IV07 74LS161
RV53 1k
Seitenspeicher
Page memory (storage)
Memoria delle pagine
IV08 2114
IV09 2114
Taktsteuerung
Timing circuit
Controllo di tonalità
IV03 SAA5020
CV61 2n2
Zeichengenerator
Symbol generator
Generatore di segnali
IV 04 SAA 5051
Y B G R Bl
RV51 10k
RV52 5k6
RV49 10k
TV13 BC548B
RV48 10k
DV11
5Vb
RV26 5k6
RV27 5k6
RV24 100k
RV23 100k
TV03 BC548
TV04 BC548
RV31 47k
DV02
RV29 100k
RV32 75
RV33 3k9
DV03
TV06 BC548
TV07 BC548
RV34 3k9
DV04
RV36 1k5
RV37 5k6
TV08 BC548
DV06
RV38 1k5
RV39 5k6
TV09 BC548
DV07
RV41 1k5
RV42 5k6
TV11 BC548
DV08
RV43 1k5
DV12
DV14
DV15
RV44 18
DV13
TV12 BC548
RV46 3k9
TV45 BC548B
DV09
RV45 220k
RV47 1k5
RV55 330k
VT06
11
3
10
9
5
7
8

zur Grundplatte, Stecker BV 03
to basic board, plug BV 03
verso piastra di base, spina BV 03

VT 06
zur Grundplatte
to basic p.c.b.
verso piastra di base
Stift / pin / piedino / Pl 17/VT 06


12Vb
5Vb
CV09
QV01
CV02
CV08
RV11
LV01
CV61
RV09
CV11
CV04
CV03
CV27
CV26
CV24
CV23
RV14
CV07
IV01
RV16
RV12
J048
J049
CV13
RV17
RV13
J044
RV18
IV03
CV14
J043
J041
CV72
J036
J038
J024
IV09
RV54
IV08
TV14
DV16
J037
J040
RV53
IV07
J034
J028
IV06
CV57
J026
IV05
J029
J035
J027
J030
CV18
CV19
CV12
CV06
CV17
RV21
LV02
J050
RV88
RV19
CV16
CV34
RV22
RV08
RV87
RV36
RV69
RV71
CV71
CV28
RV38
IV04
IV 02
J031
J033
RV56
J032
VT02
RV65
J045
RV43
TV68
TV65
BV05
TV71
PV72
RV68
RV47
RV41
RV45
DV07
DV06
DV04
RV34
CV56
J039
RV28
RV77
RV86
RV04
RV74
DV74
LV98
TV45
RV55
DV09
DV08
RV42
TV12
RV39
RV37
TV11
RV23
TV07
RV26
RV78
RV27
DV03
RV24
TV04
RV51
LV99
RV06
RV01
TV02
RV30
RV46
TV13
VT06
DV14
TV09
TV06
RV33
DV02
RV32
TV08
RV29
RV31
RV44
DV03
RV49
TV01
CV01
RV03
RV02
RV48
J047
DV12
RV46
DV15
RV52
RV07
DV11
DV13
6,8 V
BV03
12
8
4
1

Leiterplatte Videotext
P.C.B. Videotext **592.849**
Piastra Televideo
Lötseite – Soldered side – Lato saldature

Service-Einstellungen

1. Mit PV 72 4,95 V an Pin 12/IV 03 einstellen.
2. Mit LV 02 gegebenenfalls Fehler beim Neueinschreiben einer Textseite minimieren. Dazu das Antennensignal abschwächen, bis Fehler auftreten und möglichst eine Testseite anwählen, die ständig neu eingeschrieben wird (Seite 199).

Service adjustments

1. Adjust pin 12/IV 03 for 4.95 V with the aid of PV 72.
2. Use LV 02, if necessary, to minimize the error when a new page of text is displayed on the screen. To do so, attenuate the antenna signal until errors appear and, where possible, select as a test page one in which new text is read in continuously.

Regolazioni di servizio

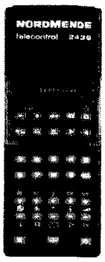
1. Regolare PV 72 in modo che il voltaggio al pin 12/IV 03 sia di 4,95 V.
2. Ridurre al minimo con LV 02 errori nella nuova trascrizione di testi di pagine nuove. Attenuare a ciò il segnale antenna, finché appaiano errori e possibimente selezionare una pagina che venga continuamente riscritta con testi nuovi.

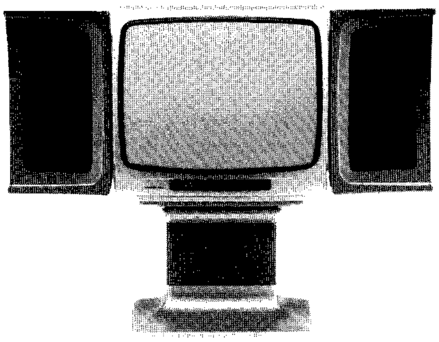
Videotext-Platine
P.C.B. Videotext
Piastra Televideo

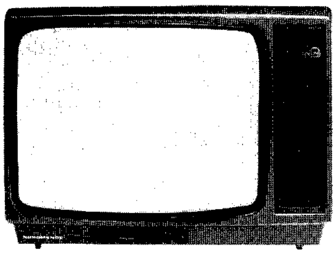
NORDMENDE

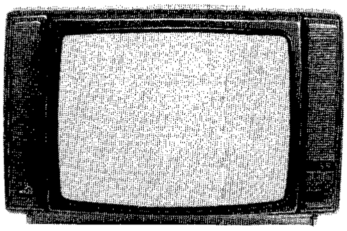
TECHNISCHER KUNDENDIENST

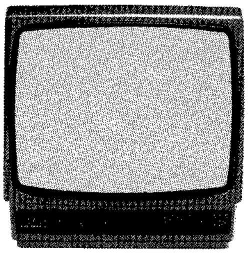
Service-Information

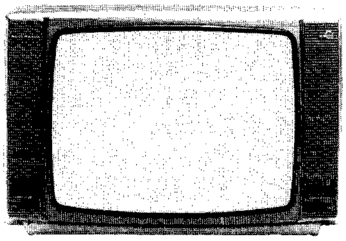












Bedienteil
Control unit
Elemento di comando
FFS-Chassis F 11

Color 4430	**983.517 J**
Color 4432	**983.521 J**
Spectra 8360	**983.523 J**
Spectra 8370	**983.524 J**
Spectra 8362	**983.528 J**
Spectra 8372	**983.535 J**
Color 5472	**983.538 J**
Color 4437	**983.546 J**
Color 5477	**983.552 J**
Spectra 8377	**983.557 J**
Spectra 8367	**983.562 J**
Color TPX 2436	**983.570 J**
Color Bisonic 2436	**983.574 J**
Spectra 8472	**984.536 J**
Spectra 8477	**984.558 J**
Spectra 5072	**985.525 J**
Spectra 4070	**985.526 J**
Spectra 4072	**985.534 J**
Spectra 5077	**985.541 J**
Spectra 8077	**985.542 J**
Spectra 4077	**985.546 J**

NORDMENDE

Diese Angaben und Hinweise sind ausschließlich für den Service des Fachhändlers bestimmt · Änderungen vorbehalten · These instructions are for service dealers only · Subject to modification · Questi dati e queste istruzioni sono riservati ai tecnici del servizio assistenza · Con riserva di modifiche

Modulliste · Module List · Lista moduli

Color 4430 983.517 J
Color 4432 983.521 J
Color 4437 983.546 J

FFS-Chassis F11 783.530.B 00 58

Pos.	Art.-Nr. Part. No. No. articolo	Bezeichnung	Part	Descrizione
		Bedienteil-Module:	**Control unit modules:**	**Moduli sez. comandi:**
–	783.587.A 00	1)Bedienteil, achat	1)Control unit, agate	1)Sezione comandi, agata
R	592.662	Leiterplatte, kpl., System 2436	P.C.B., cpl., system 2436	Piastra, cpl., sistema 2436
P	592.670	Leiterplatte, kpl., Netzteil	P.C.B., cpl., power supply	Piastra, cpl., di rete
A	583.513	Infra-Vorverstärker, kpl.	Infra-red pre-amplifier, cpl.	Preamplificatore infrarossi, cpl.
B	583.519	Infra-Geber, ABDY	Infra-red generator, ABDY	Telecomando infra, ABDY
		Chassis-Module:	**Chassis modules:**	**Telaio del moduli:**
H	563.796	HF-Block, kpl., (MTS 2020-S)	RF block, cpl., (MTS 2020-S)	Modulo AF, cpl., (MTS 2020-S)
S	592.672	Ton-ZF-Modul	Sound-IF module	Modulo IF-audio
C	592.651	PAL-Decoder-Modul	PAL-decoder module	Modulo PAL-decoder
V	592.653	Bildrohranschluß-Platine, kpl.	P.C.B., cpl., CRT socket	Piastra, zoccolo cinescopio, cpl.

Color 5472 983.538 J
Color 5477 983.552 J
Spectra 8360 983.523 J
Spectra 8370 983.524 J
Spectra 8472 984.536 J
Spectra 8477 984.558 J

FFS-Chassis F11 783.530.B 00 58

Pos.	Art.-Nr. Part. No. No. articolo	Bezeichnung	Part	Descrizione
		Bedienteil-Module:	**Control unit modules:**	**Moduli sez. comandi:**
–	783.585.A 00	1)Bedienteil, achat	1)Control unit, agate	1)Sezione comandi, agata
–	783.585.B 00	1)Bedienteil, bronze-dunkel	1)Control unit, bronze-dark	1)Sezione comandi, bronzo-scuro
B	592.663	Leiterplatte, kpl., Bedienteil	P.C.B., cpl., control unit	Piastra, cpl., sezione comandi
R	592.662	Leiterplatte, kpl., System 2436	P.C.B., cpl., system 2436	Piastra, cpl., sistema 2436
–	592.665	Leiterplatte, kpl., 2. Lautsprecher-Anschluß 2 x 6 W	P.C.B., cpl., 2. loudspeaker connection 2 x 6 W	Piastra, cpl., connettore altoparlante 2 x 6 W
P	592.808	Leiterplatte, kpl., Netzteil	P.C.B., cpl., power supply	Piastra, cpl., di rete
A	583.513	Infra-Vorverstärker, kpl.	Infra-red pre-amplifier, cpl.	Preamplificatore infrarossi, cpl.
B	583.504	Infra-Geber	Infra-red generator	Telecomando infra
B	583.519	Infra-Geber, ABDY	Infra-red generator, ABDY	Telecomando infra, ABDY
		Chassis-Module:	**Chassis modules:**	**Telaio del moduli:**
H	563.796	HF-Block, kpl., (MTS 2020-S)	RF block, cpl., (MTS 2020-S)	Modulo AF, cpl., (MTS 2020-S)
S	592.672	Ton-ZF-Modul	Sound-IF module	Modulo IF-audio
C	592.651	PAL-Decoder-Modul	PAL-decoder module	Modulo PAL-decoder
C	592.675	PAL-Decoder-Modul (MELF)	PAL-decoder module (MELF)	Modulo PAL-decoder (MELF)
V	592.653	Bildrohranschluß-Platine, kpl.	P.C.B., cpl., CRT socket	Piastra zoccolo cinescopio, cpl.
		1)wird nicht komplett geliefert	1)not supplied as a complete unit	1)non viene fernito completo

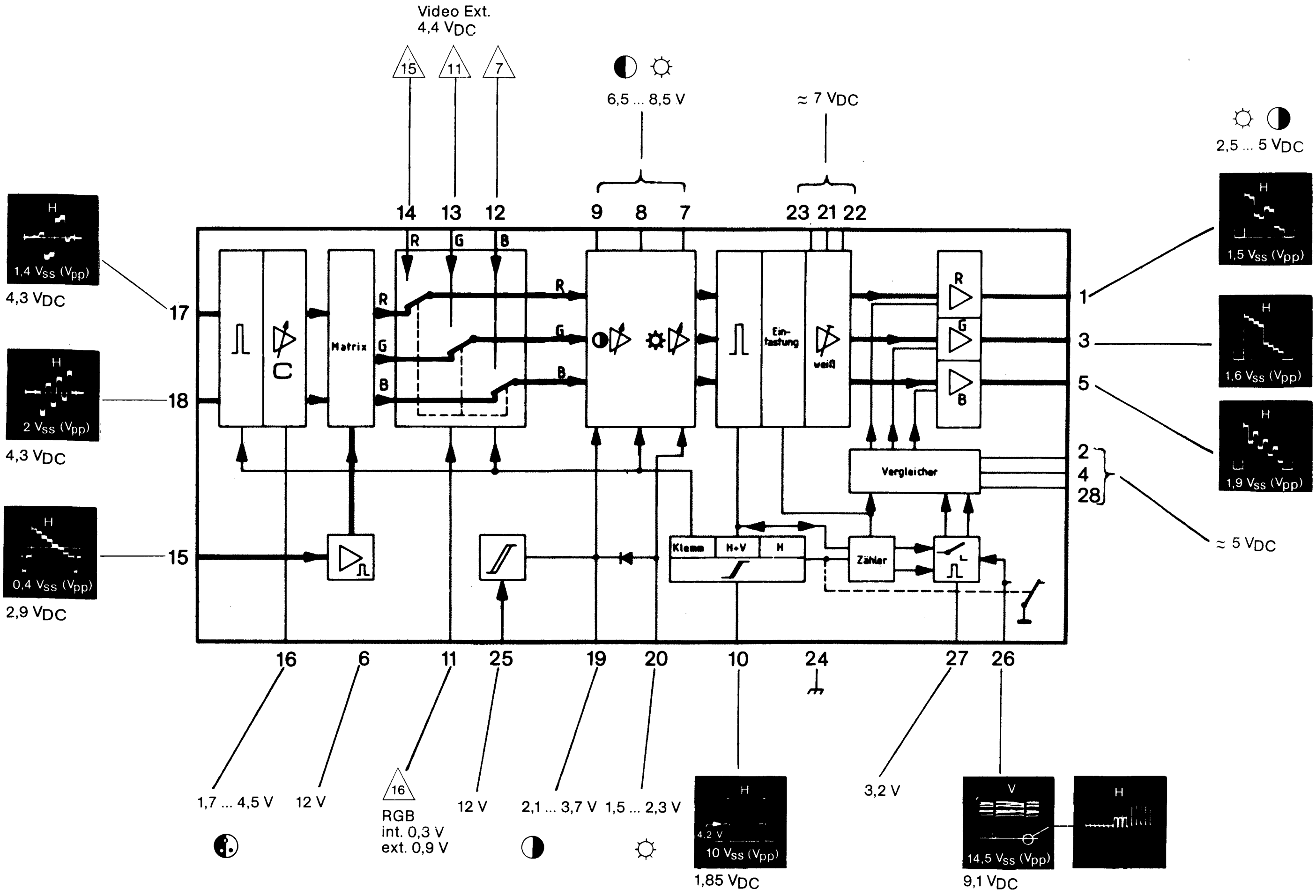
Modulliste · Module List · Lista moduli

Pos.	Art.-Nr. Part. No. No. articolo	Bezeichnung	Part	Descrizione
		Spectra 8362 983.528 J **Spectra 8372 983.535 J** **Spectra 8377 983.557 J** **Spectra 8367 983.562 J** FFS-Chassis F11 783.539.B 00 77		
		Bedienteil-Module:	**Control unit modules:**	**Moduli sez. comandi:**
–	783.585.A 00	1)**Bedienteil, achat**	1)**Control unit, agate**	1)**Sezione comandi, agata**
–	783.585.B 00	1)**Bedienteil, bronze-dunkel**	1)**Control unit, bronze-dark**	1)**Sezione comandi, bronzo-scuro**
B	592.663	**Leiterplatte, kpl., Bedienteil**	**P.C.B., cpl., control unit**	**Piastra, cpl., sezione comandi**
R	592.662	**Leiterplatte, kpl., System 2436**	**P.C.B., cpl., system 2436**	**Piastra, cpl., sistema 2436**
S	592.664	**Leiterplatte, kpl., Ton-Endstufe 12 W**	**P.C.B., cpl., power amplifier 12 W**	**Piastra, cpl., amplificatore finale 12 W**
–	592.666	**Leiterplatte, kpl., 2. Lautsprecher-Anschluß 2 x 12 W**	**P.C.B., cpl., 2. loudspeaker connection 2 x 12 W**	**Piastra, cpl., connettore altoparlante 2 x 12 W**
P	592.660	**Leiterplatte, kpl., Netzteil**	**P.C.B., cpl., power supply**	**Piastra, cpl., di rete**
A	583.513	**Infra-Vorverstärker, kpl.**	**Infra-red pre-amplifier, cpl.**	**Preamplificatore infrarossi, cpl.**
B	583.504	**Infra-Geber**	**Infra-red generator**	**Telecomando infra**
		Chassis-Module:	**Chassis modules:**	**Telaio del moduli:**
H	563.796	**HF-Block, kpl., (MTS 2020-S)**	**RF block, cpl., (MTS 2020-S)**	**Modulo AF, cpl., (MTS 2020-S)**
S	592.672	**Ton-ZF-Modul**	**Sound-IF module**	**Modulo IF-audio**
C	592.675	**PAL-Decoder-Modul (MELF)**	**PAL-decoder module (MELF)**	**Modulo PAL-decoder (MELF)**
V	592.653	**Bildrohranschluß-Platine, kpl.**	**P.C.B., cpl., CRT socket**	**Piastra zoccolo cinescopio, cpl.**
		Color TPX 2436 983.570 J FFS-Chassis F11 783.530.B 00 58		
		Bedienteil-Module:	**Control unit modules:**	**Moduli sez. comandi:**
–	583.517	**Bedienungs-Modul**	**Control panel module**	**Modulo comandi**
B	583.518	**Anzeige-Modul**	**Indication module**	**Modulo indicatore**
–	583.516	**Netzschalter-Modul**	**Mains switch module**	**Modulo interruttore**
D/R	592.662	**Leiterplatte, kpl., System 2436**	**P.C.B., cpl., system 2436**	**Piastra, cpl., sistema 2436**
P	592.808	**Leiterplatte, kpl., Netzteil**	**P.C.B., cpl., power supply**	**Piastra, cpl., di rete**
A	583.515	**Infra-Vorverstärker, kpl.**	**Infra-red pre-amplifier, cpl.**	**Preamplificatore infrarossi, cpl.**
B	583.504	**Infra-Geber**	**Infra-red generator**	**Telecomando infra**
		Chassis-Module:	**Chassis modules:**	**Telaio del moduli:**
H	563.796	**HF-Block, kpl., (MTS 2020-S)**	**RF block, cpl., (MTS 2020-S)**	**Modulo AF, cpl., (MTS 2020-S)**
S	592.672	**Ton-ZF-Modul**	**Sound-IF module**	**Modulo IF-audio**
C	592.675	**PAL-Decoder-Modul (MELF)**	**PAL-decoder module (MELF)**	**Modulo PAL-decoder (MELF)**
V	592.653	**Bildrohranschluß-Platine, kpl.**	**P.C.B., cpl., CRT socket**	**Piastra, cpl., zoccolo cinescopio**
		1)wird nicht komplett geliefert	1)not supplied as a complete unit	1)non viene fernito completo
		Service-Hinweis	**Service Note**	**Istruzione per il servizio assistenza**
		Bei Ersatzteilbestellungen bitte unbedingt die Ersatzteilnummer angeben. Vollständige Ersatzteillisten befinden sich auf Microfilm.	When ordering spare parts it is absolutely essential that the spare part no. be given. Complete spare parts lists can be taken from microfilm.	Per la consegna di parti di ricambio si pregha di indicare il numero della parte di ricambio. Liste parti ricambio complete si trovono su microfilm.

Modulliste · Module List · Lista moduli

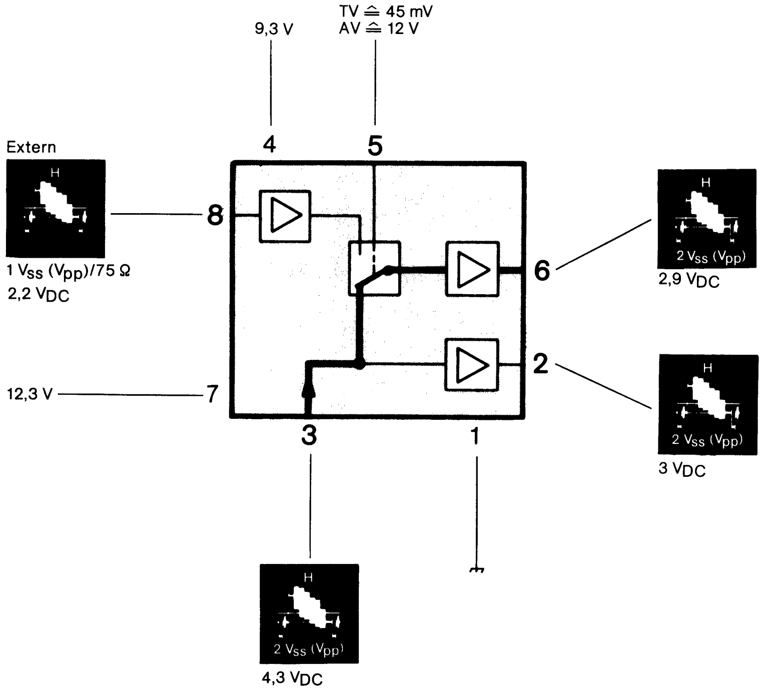
Pos.	Art.-Nr. Part. No. No. articolo	Bezeichnung	Part	Descrizione
		Color Bisonic 2436 983.574 J		
		FFS-Chassis F11 783.533.B 00 74		
		Bedienteil-Module:	**Control unit modules:**	**Moduli sez. comandi:**
–	**783.588.A 00**	1)**Bedienteil, achat**	1)**Control unit, agate**	1)**Sezione comandi, agata**
R	**592.662.A**	**Leiterplatte, kpl., System 2436**	**P.C.B., cpl., system 2436**	**Piastra, cpl., sistema 2436**
P	**592.823**	**Leiterplatte, kpl., Netzteil**	**P.C.B., cpl., power supply**	**Piastra, cpl., di rete**
A	**583.513.B**	**Infra-Vorverstärker, kpl.**	**Infra-red pre-amplifier, cpl.**	**Preamplificatore infrarossi, cpl.**
B	**583.519**	**Infra-Geber, ABDY**	**Infra-red generator, ABDY**	**Telecomando infra, ABDY**
		Chassis-Module:	**Chassis modules:**	**Telaio del moduli:**
H	**563.796**	**HF-Block, kpl., (MTS 2020-S)**	**RF block, cpl., (MTS 2020-S)**	**Modulo AF, cpl., (MTS 2020-S)**
S	**560.789.6**	**Pseudo-Stereo-Ton-Modul**	**Sound-IF-stereo module**	**Modulo FI tono bi-audio**
P	**592.688**	**Leiterplatte, kpl., NF-Verstärker**	**P.C.B., cpl. AF amplifier**	**Piastra, cpl., amplificatore BF**
C	**592.675**	**PAL-Decoder-Modul (MELF)**	**PAL-decoder module (MELF)**	**Modulo PAL-decoder (MELF)**
V	**592.653**	**Bildrohranschluß-Platine, kpl.**	**P.C.B., cpl., CRT socket**	**Piastra, cpl., zoccolo cinescopio**
		Spectra 4070 985.526 J **Spectra 4072 985.534 J** **Spectra 4077 985.546 J**		
		FFS-Chassis F11 783.530.B 00 58		
		Bedienteil-Module:	**Control unit modules:**	**Moduli sez. comandi:**
–	**784.586.A 00**	1)**Bedienteil**	1)**Control unit**	1)**Sezione comandi**
R	**592.662**	**Leiterplatte, kpl., System 2436 (30 Volt)**	**P.C.B., cpl., system 2436 (30 Volt)**	**Piastra, cpl., sistema 2436 (30 Volt)**
P	**592.670**	**Leiterplatte, kpl., Netzteil**	**P.C.B., cpl., power supply**	**Piastra, cpl., di rete**
A	**583.513**	**Infra-Vorverstärker, kpl. (2436)**	**Infra-red pre-amplifier, cpl.**	**Preamplificatore infrarossi, cpl.**
B	**583.519**	**Infra-Geber, ABDY**	**Infra-red generator, ABDY**	**Telecomando infra, ABDY**
		Chassis-Module:	**Chassis modules:**	**Telaio del moduli:**
H	**563.796**	**HF-Block, kpl. (MTS 2020-S)**	**RF-block, cpl., (MTS 2020-S)**	**Modulo AF, cpl., (MTS 2020-S)**
S	**592.672**	**Ton-ZF-Modul**	**Sound-IF module**	**Modulo IF-audio**
C	**592.675**	**PAL-Decoder-Modul (MELF)**	**PAL-decoder module (MELF)**	**Modulo PAL-decoder (MELF)**
V	**592.653**	**Bildrohranschluß-Platine, kpl.**	**P.C.B., cpl., CRT socket**	**Piastra, cpl., zoccolo cinescopio**
		1)wird nicht komplett geliefert	1)not supplied as a complete unit	1)non viene fernito completo

IV 02 TDA 3506



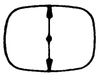
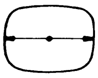
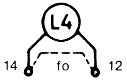
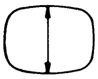
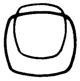
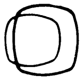
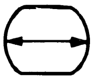
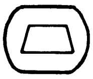
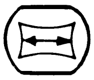
Video Ext.
4,4 V$_{DC}$
15
11
7
14
13
12
6,5 ... 8,5 V
9
8
7
≈ 7 V$_{DC}$
23
21
22
2,5 ... 5 V$_{DC}$
H
1,4 Vss (Vpp)
4,3 V$_{DC}$
17
H
2 Vss (Vpp)
4,3 V$_{DC}$
18
H
0,4 Vss (Vpp)
2,9 V$_{DC}$
15
Matrix
R
G
B
Ein-
fastung
weiß
Vergleicher
Klemm
H+V
H
Zähler
H
1,5 Vss (Vpp)
1
H
1,6 Vss (Vpp)
3
H
1,9 Vss (Vpp)
5
2
4
28
≈ 5 V$_{DC}$
16
6
11
25
19
20
10
24
27
26
1,7 ... 4,5 V
12 V
16
RGB
int. 0,3 V
ext. 0,9 V
12 V
2,1 ... 3,7 V
1,5 ... 2,3 V
H
4,2 V
10 Vss (Vpp)
1,85 V$_{DC}$
3,2 V
V
14,5 Vss (Vpp)
9,1 V$_{DC}$
H

IV 03 TEA 2014



9,3 V
TV ≙ 45 mV
AV ≙ 12 V
4
5
Extern
H
1 Vss (Vpp)/75 Ω
2,2 V$_{DC}$
8
12,3 V
7
3
1
H
2 Vss (Vpp)
4,3 V$_{DC}$
6
H
2 Vss (Vpp)
2,9 V$_{DC}$
2
H
2 Vss (Vpp)
3 V$_{DC}$

Einstellarbeiten / Initial adjustment / Operazioni di messa a punti

Einstellung Adjustment Taratura	Position Posizione	einstellen auf adjust to regolare su	Hinweise Notes Avvisi
Hauptspannung Principale voltage Tensione principale	PP 01	140 V ± 1 V bei Geräten mit Diodensplit-Trafo with sets having diode split transformer con modelli con trasformatore a separazione diodica	◑ + ☼ = min.
		145 V ± 1 V bei Geräten mit Kaskade with sets having cascade con modelli con triplicatore	
Vertikalsynchronisation Verticalsynchronisation Sincronizzione verticale	PF 01		
Zeilenfrequenz Line frequency Frequenza di riga	PL 02		IL 01 
Vertikalamplitude Vertical amplitude Ampiezza verticale	PF 02		
Vertikalposition Vertical position Posizione verticale	PF 04		
Horizontalposition Horizontal position Posizione orrizontale	PL 01		
Horizontalamplitude Horizontal amplitude Ampiezza orrizzontale	PG 01		
Ost-West-Trapez East-West trapeze Trapezi est/ovest	PG 02		
Ost-West-Amplitude East-West amplitude Ampiezza est/ovest	PG 03		
5,5-MHz minimum	LV 07	5,5 MHz min.	Oscilloscope (Z7)
4,43 MHz minimum	LV 09	4,43 MHz min.	Oscilloscope (Z7)
Referenz-Oscillator 4,43 MHz **A**	CC 14	+ V, ± U farblos colourness senza sfumature di colore	FUBK-Sendertestbild FUBK transmitter test pattern Monoscopio del transmettiore
B	CC 14	langsames Durchlaufen der Farbbalken until the colour bars wander slowly barre colori movimento lento	Farbtestbild Colour bar signal Segnale barre colore ③ ② 4,2 . . . 4,4 V → ①
PAL-Amplitude PAL-Phase	PC 01 LC 05	Paarigkeit min. Pairing min. Parita min.	
Schirmgitterspannung Screen grid voltage Tensione griglia schermo	PUG 2	Katode mit höchster Spannung auf 165 V— einstellen Adjust the cathode with the highest voltage to 165 V DC Regolare il catodo con la tensione più alta su 165 V—	PV 03, PV 04, PV 06 } auf mechan. Mitte stellen set to center position portare in posiz. meccanica media ◑ + ☼ = min. (Z6) + (Z7) + (Z9) messen measure misurare
Weißabgleich White alignment Taratura del bianco	PV 03	85 V_{SS} (V_{pp}) bei 20"/22" Geräten with 20"/22" sets con modelli 20"/22"	FUBK-Sendertestbild FUBK transmitter test pattern Monoscopio del transmettiore
		100 V_{SS} (V_{pp}) bei 26" Geräten with 26" sets con modelli 26"	◑ = max. ☼ = min.
	PV 04 PV 06	die hellen Flächen weiß einstellen adjust bright areas on screen to white regol. le parti chiare in modo che siano bianche	Oscilloscope (Z7)
Grauabgleich Gray alignment Taratura dei grigi	PV 50 PV 70	die dunklen Flächen farblos einstellen adjust dark areas on screen to colourness regolare le parti scure in modo che siano senza sfumature di colore	◑ = min. ☼ = Bild gerade sichtbar picture just visable immagine appena visible Weiß- und Grauabgleich eventuell wiederholen Repeat white and gray alignment if necessary Ripetizione eventuale della taratura del bianco e dei grigi

Modulliste · Module List · Lista moduli

Pos.	Art.-Nr. Part No. No. articolo	Bezeichnung	Part	Descrizione
		FFS-Chassis F 11 783.548.B 00 88		
		Bedienteil-Module:	**Control unit modules:**	**Moduli sezione comandi:**
–	783.589.A 00	1)Bedienteil, umbra-metallic	1)Control unit, umber-metallic	1)Sezione comandi, metallizzato-bruna
R	592.690	Leiterplatte, kpl., System 2239	P.C.B., cpl., system 2239	Piastra, cpl., sistema 2239
V	592.849	Leiterplatte, kpl., Videotext	P.C.B., cpl., videotext	Piastra, cpl., televideo
P	592.620	Leiterplatte, kpl., Netzteil	P.C.B., cpl., power supply	Piastra, cpl., di rete
A	583.521	Infra-Vorverstärker, kpl.	Infra-red pre-amplifier, cpl.	Preamplificatore infrarossi, cpl.
B	583.520	Infra-Geber 2239	Infra-red generator 2239	Telecomando Infra 2239
		Chassis-Module:	**Chassis modules:**	**Telaio del moduli:**
H	563.799	HF-Block, kpl., (MTS 2004-S)	RF block, cpl., (MTS 2004-S)	Modulo AF, cpl., (MTS 2004-S)
S	592.650	Ton-ZF-Modul	Sound-IF module	Modulo IF-audio
C	592.675	PAL-Decoder-Modul (MELF)	PAL-decoder module (MELF)	Modulo PAL-decoder (MELF)
V	592.653	Bildrohranschluß-Platine, kpl.	P.C.B., cpl. CRT socket	Piastra, zoccolo cinescopio, cpl.
		Color FFS-Chassis F 11 783.556.B 00 91 FFS-Chassis F 11 B 783.571.B 00 91 B		
		Bedienteil-Module:	**Control unit modules:**	**Moduli sezione comandi:**
–	784.581.B 00	1)Bedienteil, umbra-metallic	1)Control unit, umber-metallic	1)Sezione comandi metallizzato-bruna
R	592.690	Leiterplatte, kpl., System 2239	P.C.B., cpl., system 2239	Piastra, cpl., sistema 2239
V	592.849	Leiterplatte, kpl., Videotext	P.C.B., cpl., videotext	Piastra, cpl., televideo
P	592.701	Leiterplatte, kpl., Netzteil	P.C.B., cpl., power supply	Piastra, cpl., di rete
A	583.521	Infra-Vorverstärker, kpl.	Infra-red pre-amplifier, cpl.	Preamplificatore infrarossi, cpl.
B	583.520	Infra-Geber 2239	Infra-red generator 2239	Telecomando Infra 2239
		Chassis Module:	**Chassis modules:**	**Telaio del moduli:**
H	563.818	HF-Block, kpl., (MTS 2020-SM)	RF block, cpl., (MTS 2020-SM)	Modulo AF, cpl., (MTS 2020-SM)
S	592.841	Ton-ZF-Stereo-Modul (für Chassis 783.556.B)	Sound-IF-stereo-module (for chassis 783.556.B)	Modulo IF-audio-stereo (per telaio 783.556.B)
S	592.859	Ton-ZF-Stereo-Modul (für Chassis 783.571.B)	Sound-IF-stereo-module (for chassis 783.571.B)	Modulo IF-audio-stereo (per telaio 783.571.B)
C	592.675	PAL-Decoder-Modul (MELF)	PAL-decoder module (MELF)	Modulo PAL-decoder(MELF)
V	592.653	Bildrohranschluß-Platine, kpl.	P.C.B., cpl., CRT socket	Piastra, zoccolo cinescopio, cpl.
		1)wird nicht komplett geliefert	1)not supplied as a complete unit	1)non viene fernito completo
		Service-Hinweis Bei Ersatzteilbestellungen bitte unbedingt die Ersatzteilnummer angeben. Vollständige Ersatzteillisten befinden sich auf Microfilm.	**Service Note** When ordering spare parts it is absolutely essential that the spare part no. be given. Complete spare parts lists can be taken from microfilm.	**Istruzione per il servizio assistenza** Per la consegna di parti di ricambio si pregha di indicare il numero della parte di ricambio. Liste parti ricambio complete si trovano su microfilm.

Deutschland

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Funkschneise 13
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Eiffestraße 76
Tel.: 0 40 / 25 15 04-0

1000 **Berlin 15**
Niederlassung Berlin
Kurfürstendamm 182 – 183
Tel. 0 30 / 88 41 02-0

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Funkschneise 13
Tel.: 04 21 / 45 60 42

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Tel.: 02 01 / 319 31-0

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Olpe 16
Tel. 02 31 / 52 84 07/09

4000 **Düsseldorf 1**
Niederlassung Düsseldorf
Adlerstraße 32
Tel. 02 11 / 36 20 40 / 48 / 49

5000 **Köln 1**
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Bonner Wall 27
Tel.: 02 21 / 37 20 27/29

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Floßwörthstraße 31-33
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Lübener Straße 26-28
Tel. 09 11 / 8 02 46

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Donaustaufer Straße 172
Tel. 09 41 / 4 70 42 / 43

7022 **Leinfelden-**
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Artillerievej 90
2300 København S

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Faraday Road – Rabans Lane
Aylesbury Bucks HP 19 3 RY

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SF-01720 Vantaa 72

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STEV (Service Télévision)
63 A, rue d'Illzach
68100 Mulhouse

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Lamia National Road
Athen

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Finnabair Industrial Park
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Islas Canarias/ESPANA

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Aqueduct Street
Birkirkara

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Maalderij 19
1185 ZB Amstelveen

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FRIGO NORSK, John Bryhn
Bjœrnstjerne, Bjœrnsonsgate 60
3000 DRAMMEN

Österreich
SDN Unterhaltungselektronische
Geräte Vertriebsges.m.b.H.
Eduard Kittenbergerg. 56,
Objekt 7
A-1235 Wien

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Porto

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Nicosia, Zypern

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Ägypten
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Mohandesin City – Cairo

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B. P. 149
Dar el Beida Alger
Algerie

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Victoria, Australia

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Kwai Chung, N.T.
Hongkong

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Shuwaikh Kuwait

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516 Corniche du Fleuve
P.O. Box 11-0125
Beirut

Libyen
THE GENERAL ELECTRONICS CO.
P.O. Box 2068
Benghazi

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P.O. Box 6540 Kg. Tunku
Selangor

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17/19, Abebe Village Rd. Iganmu
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Lagos

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Associated Electronics Ltd.
7, Egerton Road
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MAHMOOD SALEH ABBAR
P.O. Box 461
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9 Penang Road, 08-22
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Sheet Metal Industries Ltd.
P.O. Box 112
Khartoum

Thailand
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Klongsan District
Bangkok 10600

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Tunis

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Avda. D. Fernandez
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Montevideo

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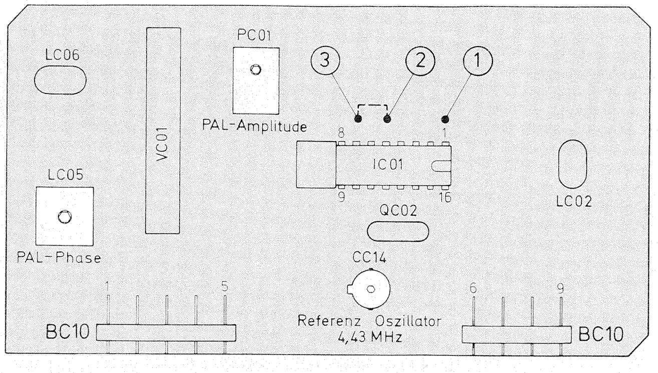
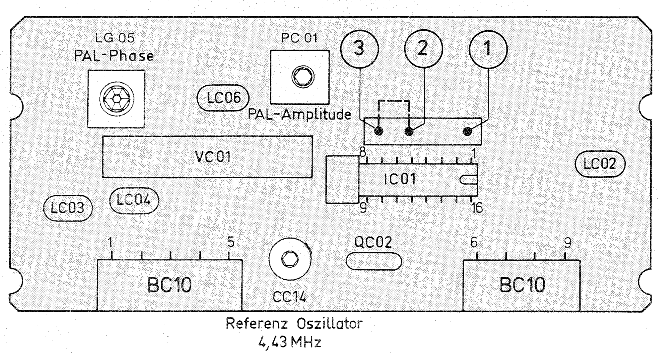
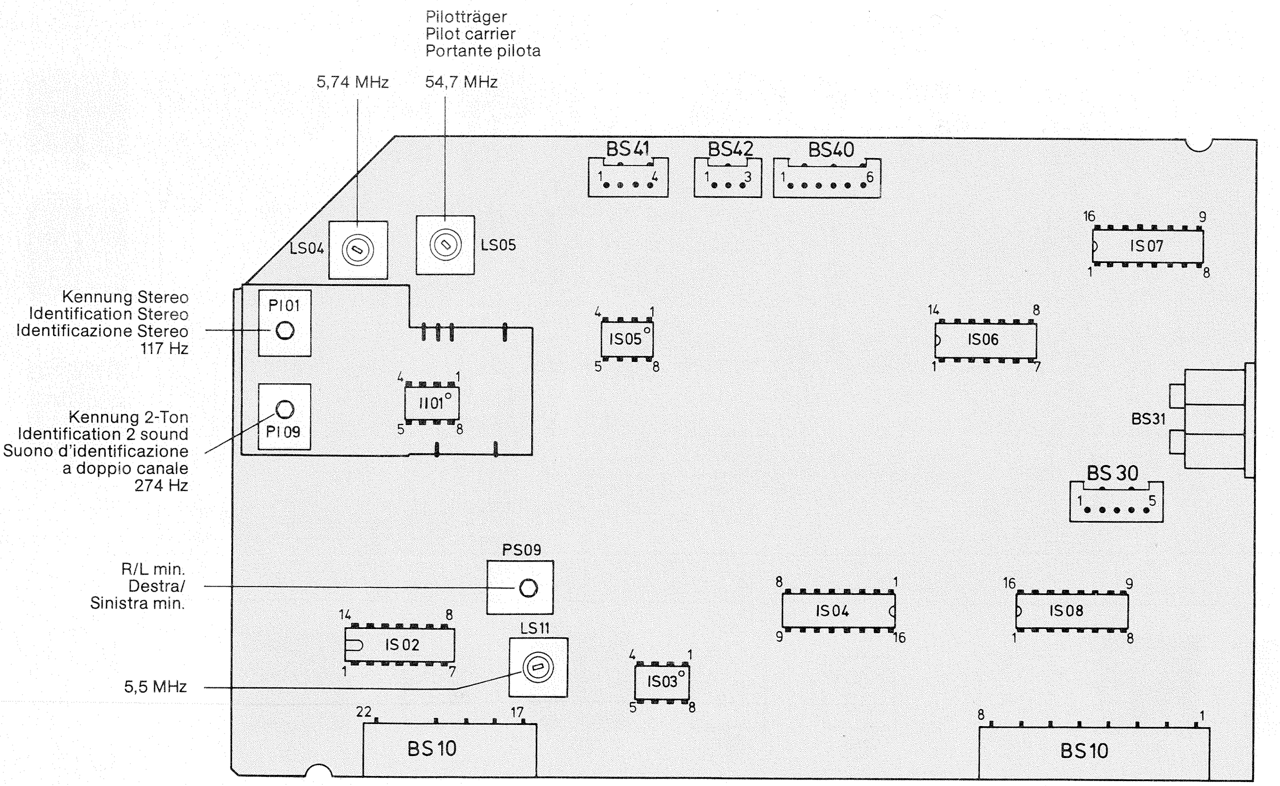

LC06
PC01
PAL-Amplitude
3
2
1
VC01
IC01
LC05
PAL-Phase
QC02
LC02
CC14
Referenz Oszillator 4,43 MHz
BC10
BC10

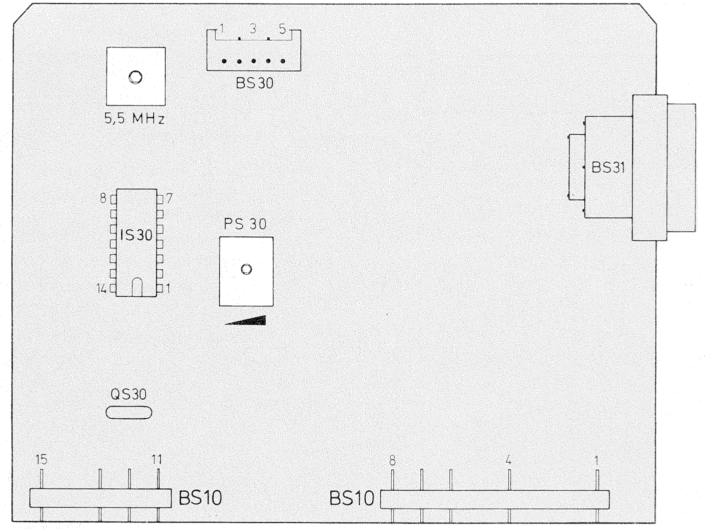
PAL-Decoder – *Decoder PAL*
592.651
Bestückungsseite – *Component side* – Parte componenti


LG 05
PAL-Phase
PC 01
PAL-Amplitude
3
2
1
LC06
VC01
IC01
LC02
LC03
LC04
QC02
BC10
BC10
CC14
Referenz Oszillator
4,43 MHz

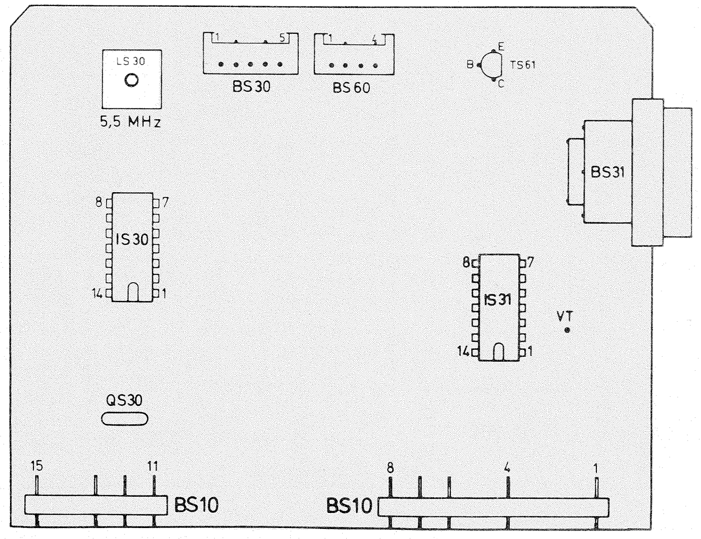
PAL-Decoder – Decoder PAL (MELF)
592.675
Bestückungsseite – *Component side* – Parte componenti


Pilotträger
Pilot carrier
Portante pilota
5,74 MHz
54,7 MHz
BS41
BS42
BS40
LS04
LS05
IS07
Kennung Stereo
Identification Stereo
Identificazione Stereo
117 Hz
PI01
IS05
IS06
Kennung 2-Ton
Identification 2 sound
Suono d'identificazione
a doppio canale
274 Hz
PI09
II01
BS31
BS 30
R/L min.
Destra/
Sinistra min.
PS09
IS02
LS11
IS04
IS08
5,5 MHz
IS03
BS 10
BS 10

Ton-ZF/Stereo-Modul — *Sound IF Stereo module* — Modulo FI-tono stereo
592.673
Bestückungsseite – *Component side* – Parte componenti

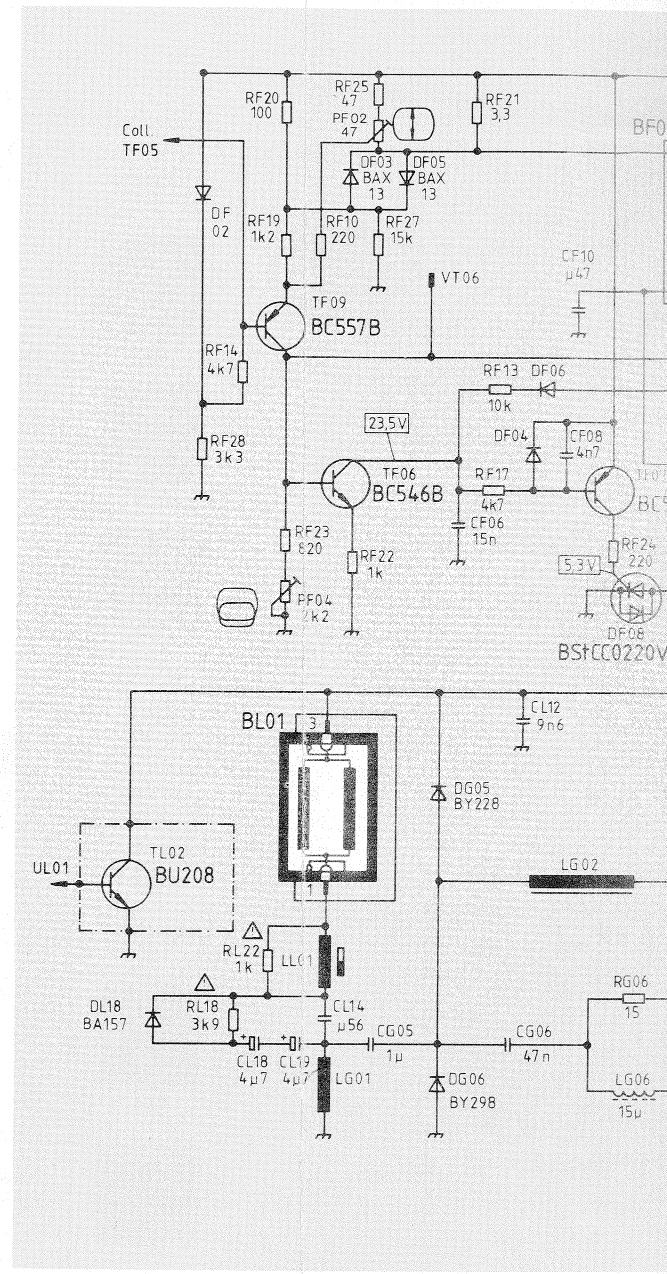

BS30
5,5 MHz
BS31
IS30
PS 30
QS30
BS10
BS10

Ton-ZF Modul
Sound-IF module
Modulo FI-tono
592.650
Bestückungsseite – *Component side* – Parte componenti

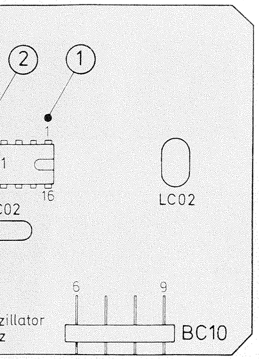

LS 30
5,5 MHz
BS30
BS60
TS61
BS31
IS30
IS31
VT
QS30
BS10
BS10

Ton-ZF Modul
Sound-IF module
Modulo FI-tono
592.672
nur bei / only with / solo con Ⓘ
Bestückungsseite – *Component side* – Parte componenti

Zeilenendstufe mit
Horizontal output st
Stadio finale di riga


Coll.
TF05
RF20
100
RF25
47
PF02
47
RF21
3,3
DF03
BAX 13
DF05
BAX 13
DF 02
RF19
1k2
RF10
220
RF27
15k
VT06
CF10
TF09
BC557B
RF14
4k7
RF13
10k
DF06
23,5V
DF04
CF08
4n7
RF28
3k3
TF06
BC546B
RF17
4k7
CF06
15n
RF23
620
RF22
1k
PF04
2k2
5,3V
DF08
BStCC0220V
BL01
CL12
9n6
DG05
BY228
UL01
TL02
BU208
LG02
RL22
1k
LL01
DL18
BA157
RL18
3k9
CL14
μ56
CG05
1μ
CG06
47n
RG06
15
CL18
4μ7
CL19
4μ7
LG01
DG06
BY298
LG06
15μ

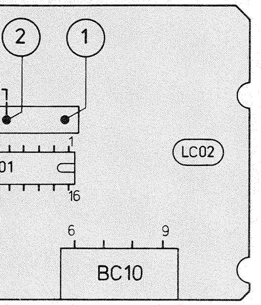
Hinweis: Diese Schaltung gilt fü
Note: This circuit is valid for
Avviso: Questo collegamento



2
1
16
LC02
02
zillator
z
6
9
BC10

coder PAL

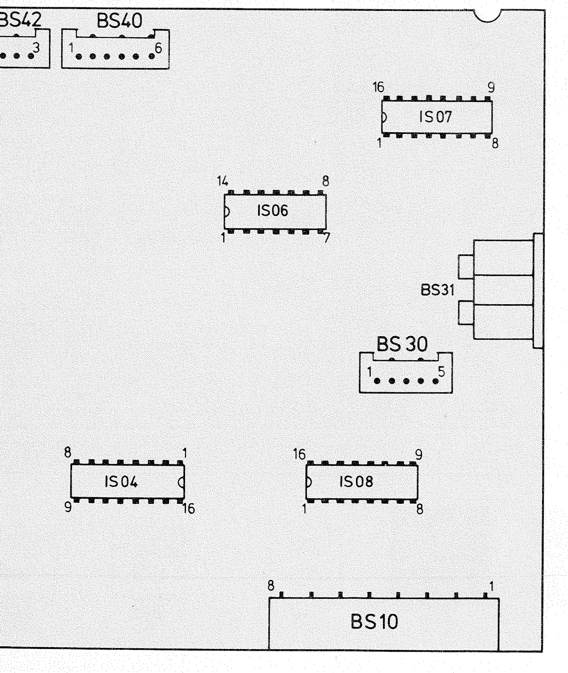
de – Parte componenti



2
1
LC02
01
16
6
9
BC10

er PAL (MELF)

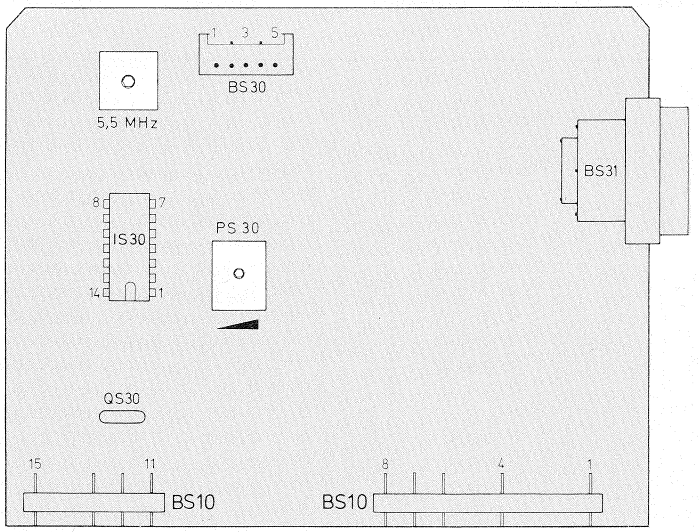
de – Parte componenti



BS42
BS40
IS07
IS06
BS31
BS 30
IS04
IS08
BS10

module — Modulo FI-tono stereo

de – Parte componenti



BS30
5,5 MHz
BS31
IS30
PS 30
QS30
15
11
BS10
8
4
1
BS10

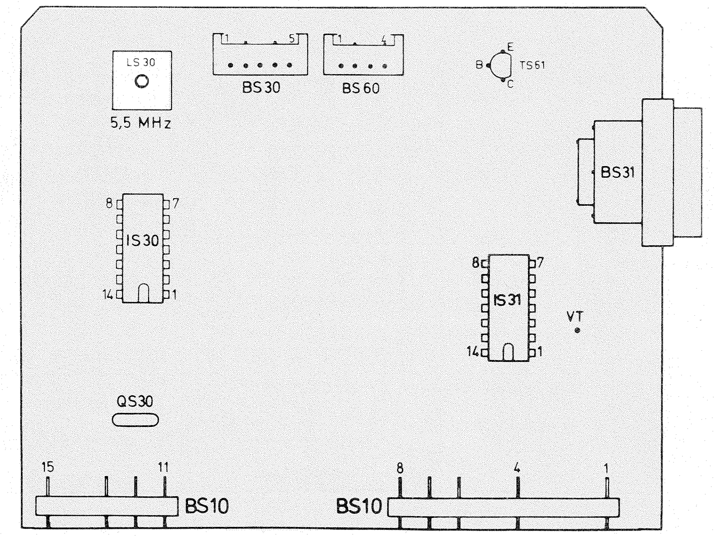
Ton-ZF Modul

Sound-IF module

Modulo FI-tono

592.650

Bestückungsseite – *Component side* – Parte componenti



LS 30
5,5 MHz
BS30
BS60
TS61
BS31
IS30
IS31
VT
QS30
15
11
BS10
8
4
1
BS10

Ton-ZF Modul

Sound-IF module

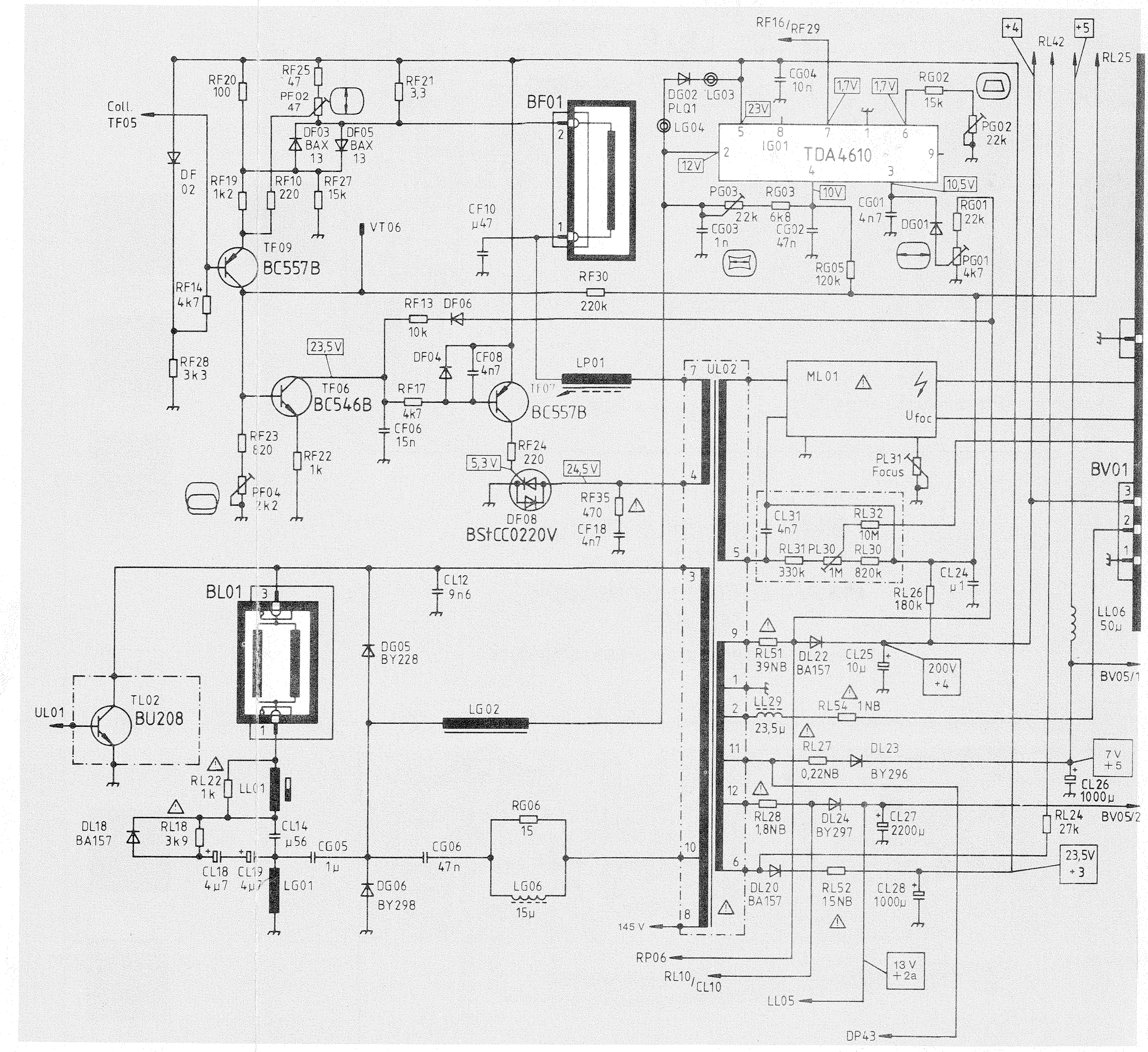
Modulo FI-tono

592.672

nur bei / only with / solo con ①

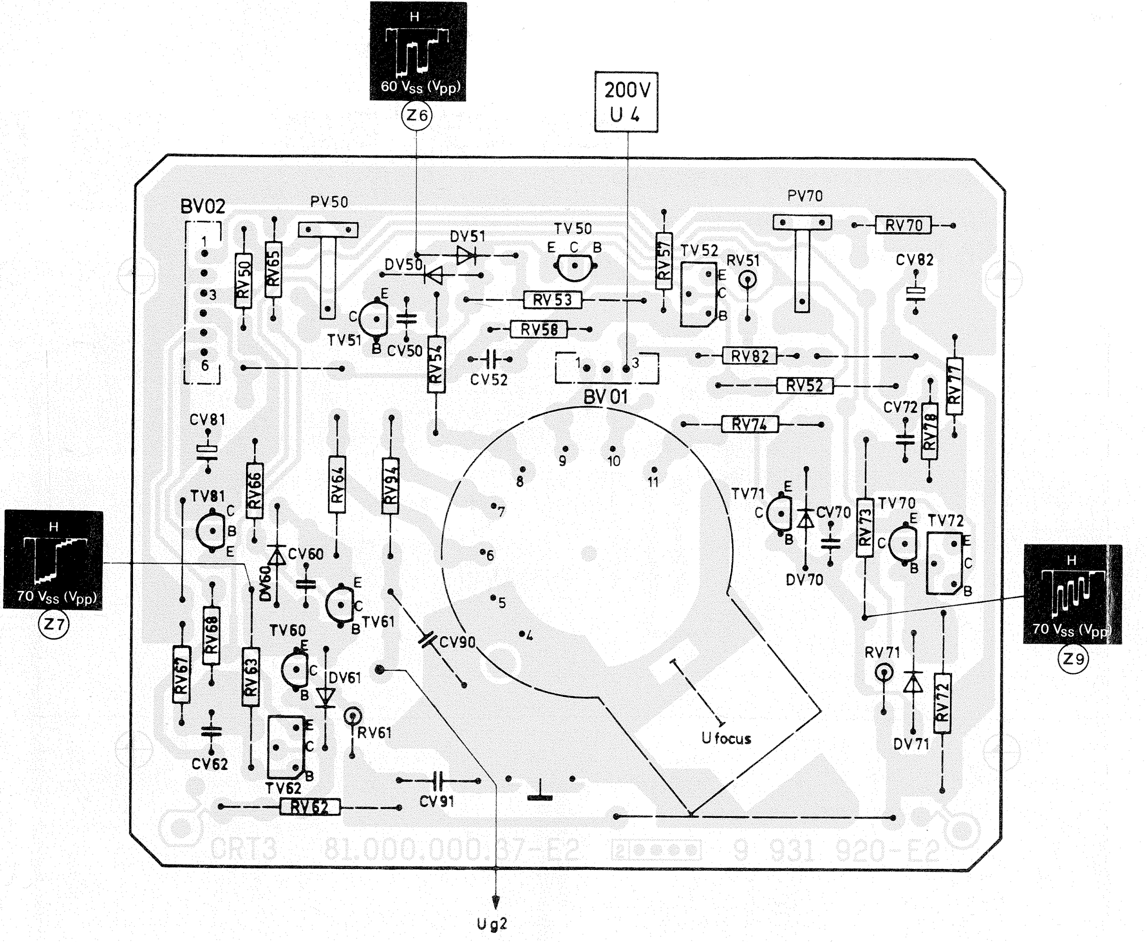
Bestückungsseite – *Component side* – Parte componenti

Zeilenendstufe mit Kaskade
Horizontal output stage with cascade
Stadio finale di riga con cascata



RF16/RF29
RL42
RL25
Coll. TF05
RF20 100
RF25 47
PF02 47
RF21 3,3
BF01
DF03 BAX 13
DF05 BAX 13
DF 02
RF19 1k2
RF10 220
RF27 15k
VT06
CF10 µ47
TF09 BC557B
RF14 4k7
RF13 10k
DF06
RF30 220k
DG02 PLQ1
LG03
LG04
CG04 10n
IG01 TDA4610
RG02 15k
PG02 22k
PG03 22k
RG03 6k8
CG03 1n
CG02 47n
CG01 4n7
DG01
RG01 22k
RG05 120k
PG01 4k7
RF28 3k3
TF06 BC546B
DF04
CF08 4n7
RF17 4k7
CF06 15n
TF07 BC557B
LP01
UL02
ML01
Ufoc
PL31 Focus
RF23 820
RF22 1k
PF04 2k2
RF24 220
DF08 BStCC0220V
RF35 470
CF18 4n7
CL31 4n7
RL32 10M
RL31 330k
PL30 1M
RL30 820k
CL24 µ1
RL26 180k
BV01
LL06 50µ
BV05/1
BL01
CL12 9n6
DG05 BY228
TL02 BU208
UL01
LG02
RL51 39NB
DL22 BA157
CL25 10µ
200V +4
LL29 23,5µ
RL54 1NB
RL27 0,22NB
DL23 BY296
7V +5
CL26 1000µ
RL24 27k
BV05/2
RL22 1k
LL01
DL18 BA157
RL18 3k9
CL14 µ56
CG05 1µ
CG06 47n
RG06 15
LG06 15µ
CL18 4µ7
CL19 4µ7
LG01
DG06 BY298
RL28 1,8NB
DL24 BY297
CL27 2200µ
23,5V +3
DL20 BA157
RL52 15NB
CL28 1000µ
145 V
RP06
RL10/CL10
13 V +2a
LL05
DP43

Hinweis: Diese Schaltung gilt für Geräte, die mit einer Kaskade ausgestattet sind.
Note: This circuit is valid for receivers which are equipped with a cascade.
Avviso: Questo collegamento è valido per modelli muniti di cascata.


60 Vss (Vpp)
Z6
200V
U 4
70 Vss (Vpp)
Z7
70 Vss (Vpp)
Z9
BV02
BV01
PV50
PV70
TV50
TV51
TV52
TV60
TV61
TV62
TV70
TV71
TV72
TV81
U focus
Ug2

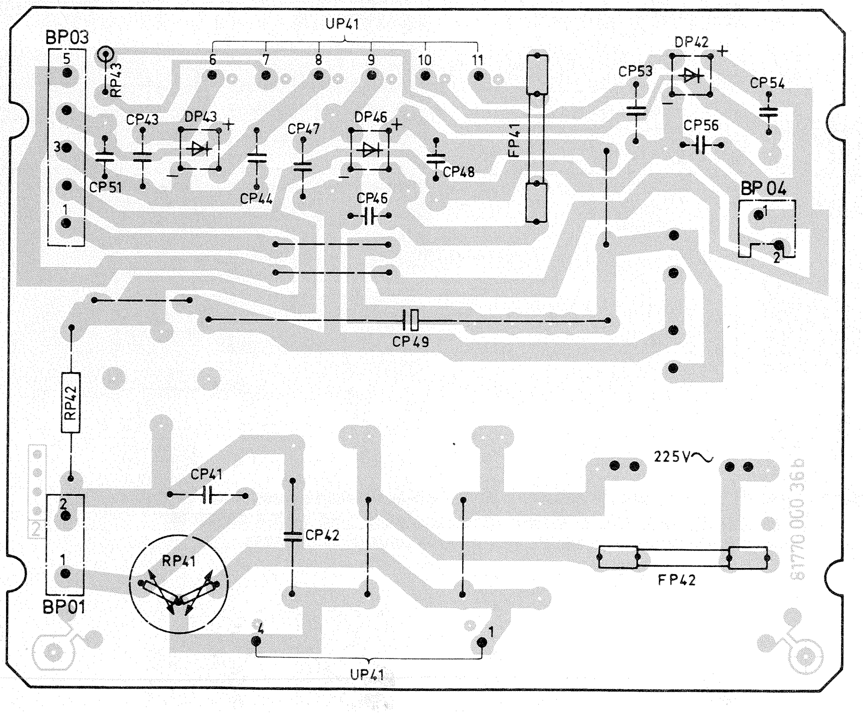
Bildrohranschluß-Platine

P.C.B. CRT socket

Piastra zoccolo cinescopio

592.653

Lötseite – *Soldered side* – Lato saldature


BP03
BP04
BP01
UP41
DP42
DP43
DP46
CP49
FP41
FP42
RP41
RP42
225V~

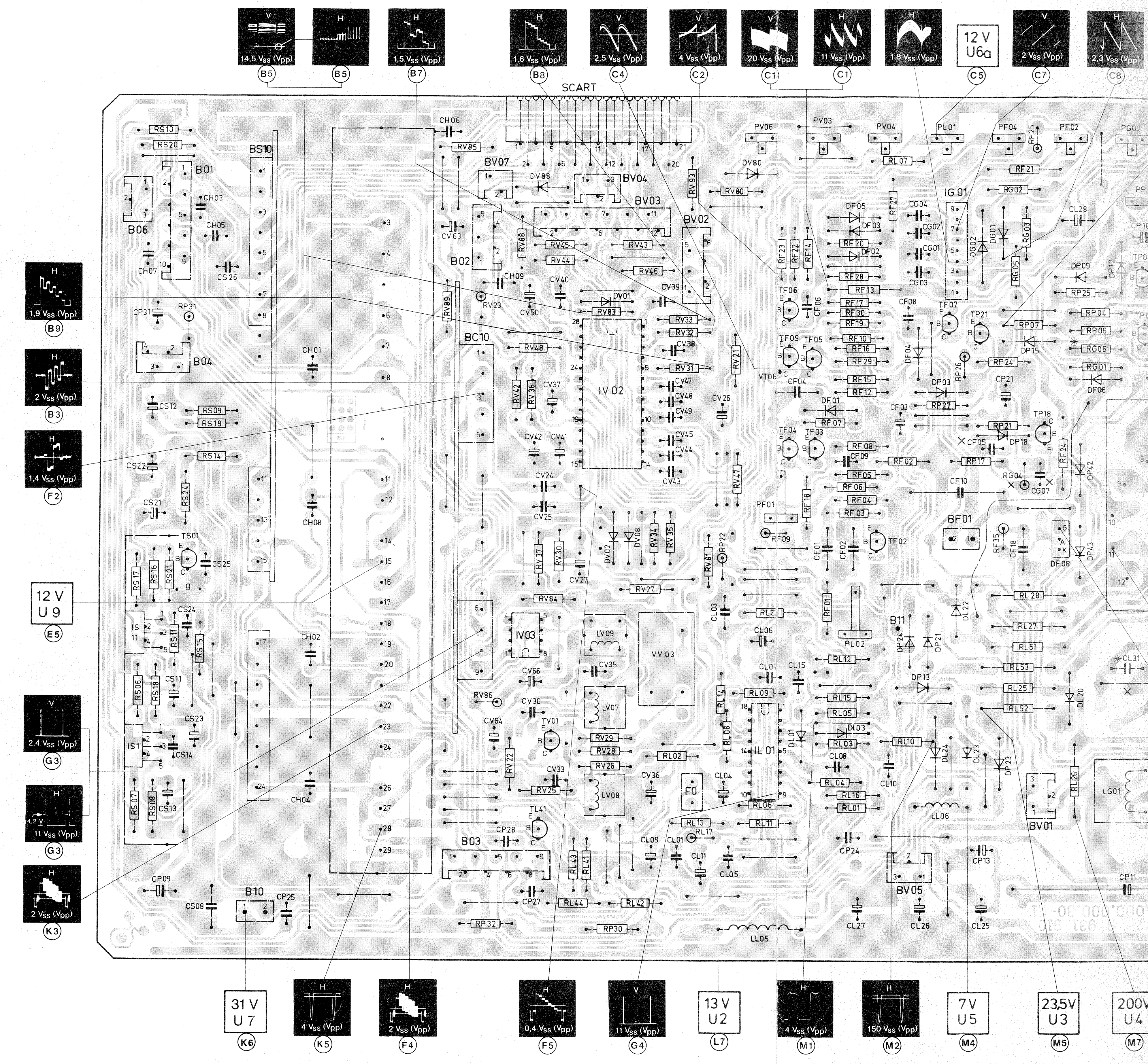
Leiterplatte Netzteil

P.C.B. Power supply

Piastra di rete

592.808

Lötseite – *Soldered side* – Lato saldature


14,5 Vss (Vpp)
B5
B5
1,5 Vss (Vpp)
B7
1,6 Vss (Vpp)
B8
2,5 Vss (Vpp)
C4
4 Vss (Vpp)
C2
20 Vss (Vpp)
C1
11 Vss (Vpp)
C1
1,8 Vss (Vpp)
12 V
U6a
C5
2 Vss (Vpp)
C7
2,3 Vss (Vpp)
C8
SCART
1,9 Vss (Vpp)
B9
2 Vss (Vpp)
B3
1,4 Vss (Vpp)
F2
12 V
U 9
E5
2,4 Vss (Vpp)
G3
4,2 V
11 Vss (Vpp)
G3
2 Vss (Vpp)
K3
31 V
U 7
K6
4 Vss (Vpp)
K5
2 Vss (Vpp)
F4
0,4 Vss (Vpp)
F5
11 Vss (Vpp)
G4
13 V
U 2
L7
4 Vss (Vpp)
M1
150 Vss (Vpp)
M2
7 V
U 5
M4
23,5 V
U 3
M5
200V
U 4
M7
IV 02
IV03
IL 01
IG 01
BS10
BC10
BV01
BV05
LG01

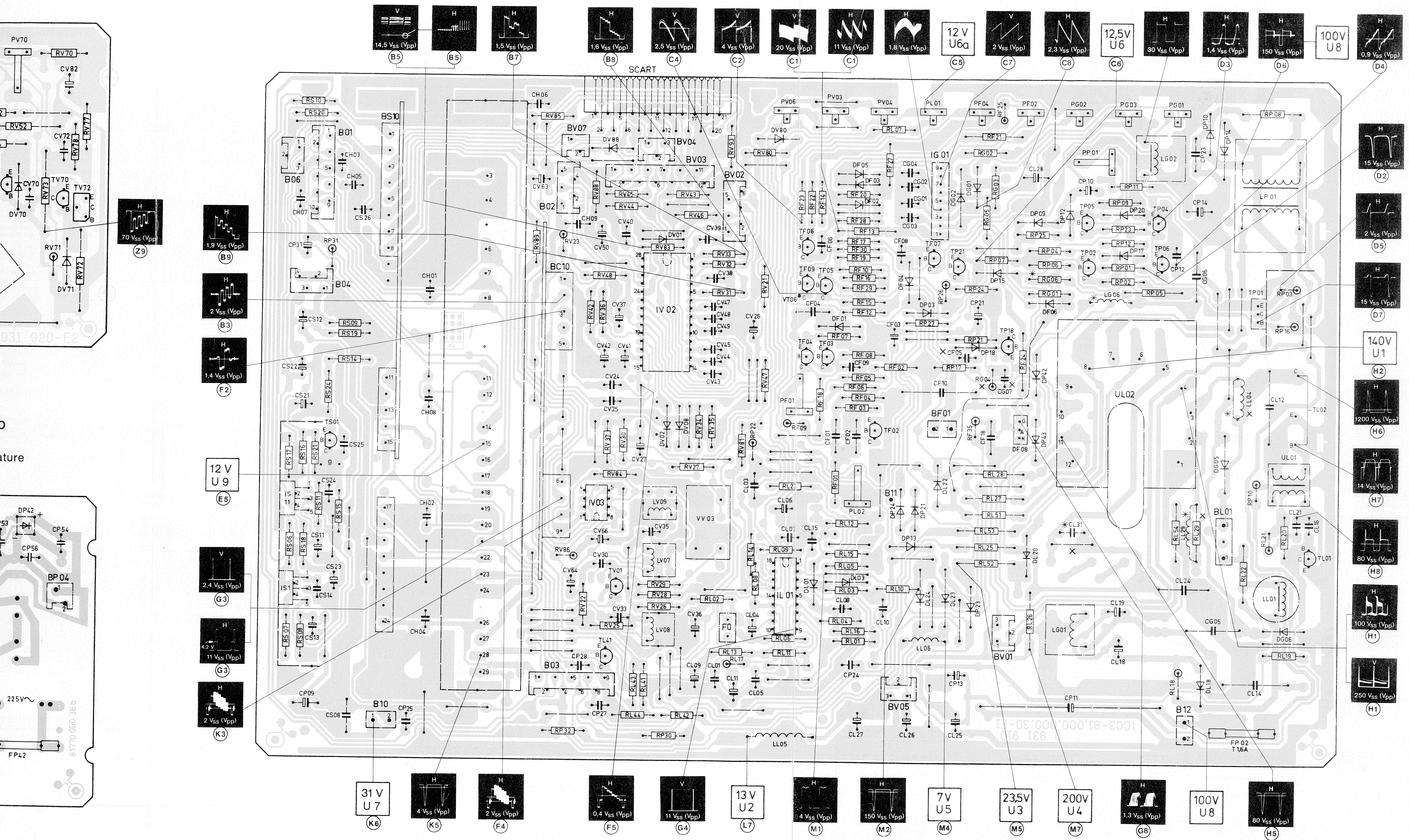
Grundplatte – *Basic P.C.B.* – Piastra di base

Lötseite – *Soldered side* – Lato saldature

o

ature

re



14,5 Vss (Vpp) B5
B5
1,5 Vss (Vpp) B7
1,6 Vss (Vpp) B8
2,5 Vss (Vpp) C4
4 Vss (Vpp) C2
20 Vss (Vpp) C1
11 Vss (Vpp) C1
1,8 Vss (Vpp)
12 V U6a C5
2 Vss (Vpp) C7
2,3 Vss (Vpp) C8
12,5V U6 C6
30 Vss (Vpp)
1,4 Vss (Vpp) D3
150 Vss (Vpp) D6
100V U8
0,9 Vss (Vpp) D4
15 Vss (Vpp) D2
2 Vss (Vpp) D5
15 Vss (Vpp) D7
140V U1 H2
1200 Vss (Vpp) H6
14 Vss (Vpp) H7
80 Vss (Vpp) H8
100 Vss (Vpp) H1
250 Vss (Vpp) H1
70 Vss (Vpp) Z9
1,9 Vss (Vpp) B9
2 Vss (Vpp) B3
1,4 Vss (Vpp) F2
12 V U 9 E5
2,4 Vss (Vpp) G3
4,2 V 11 Vss (Vpp) G3
2 Vss (Vpp) K3
31 V U 7 K6
4 Vss (Vpp) K5
2 Vss (Vpp) F4
0,4 Vss (Vpp) F5
11 Vss (Vpp) G4
13 V U2 L7
4 Vss (Vpp) M1
150 Vss (Vpp) M2
7V U5 M4
23,5V U3 M5
200V U4 M7
1,3 Vss (Vpp) G8
100V U8
80 Vss (Vpp) H5
SCART
IV 02
IV03
IL 01
IG 01
UL02
UL01
VV 03
BS10
BC10
B01
B02
B03
B04
B06
B10
B11
B12
BV01
BV02
BV03
BV04
BV05
BV07
BL01
BF01
LP 01
TL02
FP 02 T 1,6A
225V~
FP42
BP 04
931 920-E2
6I770 000 36b
931 910

Grundplatte – *Basic P.C.B.* – Piastra di base

Lötseite – *Soldered side* – Lato saldature

✳ nur bei Kaskade
only with cascade
solo con cascata

x nur bei Diodensplit-Transformator
only with diode split transformer
solo con trasformatore a separazione diodica

Instructions de montage

Le circuit imprimé vidéotexte est prévu pour être monté dans les téléviseurs couleurs NORDMENDE dotés de chassis F 10, F 11 et F 11 B, en liaison avec la télécommande telecontrol 2102, 2239, 2436, Computer-Control 5 ou 6.

1. Pour les téléviseurs munis de l'unite de commande télécontrol 2239 et Computer-Control 5, ôtez la diode DV 01 du circuit imprimé vidéotexte.
2. Pour les téléviseurs munis de l'unité de commande télécontrol 2239, 2436, Computer-Control 5 et 6, ôtez le pont S 102 se trouvant sur la plaque d'assise (voir fig. 5 ou 6).
3. Engagez le câble à 1 pole dans la fiche de branchement VT 06 du circuit imprimé vidéotexte.
4. Engagez le circuit imprimé vidéotexte sur la réglette à goupilles BV 03 de la plaque d'assise.
5. La deuxième extrémité du câble à 1 pôle est à enganger das la fiche de branchement PI 17 de la plaque d'assise. La fiche PI 17 n'existe pas pour les circuits imprimés F 10 et F 11 index A – E. Dans ce cas, coupez la fiche du câble de branchement et soudez ce câble au RF 30/RF 23 (fig. 5).
6. Placez le support du module sur le circuit imprimé vidéotexte et fixez-le au boîtier à l'aide de la vis (A) que vous trouverez jointe.
7. Percez la bande de papier comportant les mots imprimés „H-Pos." à l'aide des points d'alignement de telle sorte que l'évidement de la tige du chassis se trouve libre. Placez dans cet évidement la pièce isolante (voir fig. 1). Fixez la tôle de refroidissement du transistor TV 65 à la pièce isolante à l'aide de la vis jointe. Veillez particulièrement à ce que la tôle de refroidissement n'ait pas de contact électrique avec la tige du chassis.
8. Engagez le câble à 3 pôles dans la réglette à goupilles (C) du circuit imprimé vidéotexte et dans la réglette à goupilles BV 05 de la plaque d'assise. Veuillez faire particulièrement attention pour que le câble soit placé le plus loin possible du transformateur de lignes afin d'éviter la propagation de rayons (voir fig. 6 ou 6a).
9. Engagez le câble à 6 pôles dans la réglette à goupilles (D) du circuit imprimé vidéotexte. Veillez à la bonne position du boîtier à douilles. Les deux nez du boîtier à douilles doivent pointer vers la gauche pour les téléviseurs munis de telecontrol 2102 et vers la droite pour les téléviseurs munis des télécontrol 2239, 2436, Computer-Control 5 et 6. Engagez l'autre extrémité du câble dans la réglette à goupilles de la plaque systeme correspondante (plaque de système 2239, 2436, Computer-Control 5 et 6: VT 02, plaque de système 2102: ST 12).

Inbouwgegevens

De teletekst-moduul is voor inbouw in een NORDMENDE ktv met chassis F 10, F 11, F 11 B en voorzien van afstandbediening telecontrol 2102, 2239, 2436, Computer-Control 5 of 6.

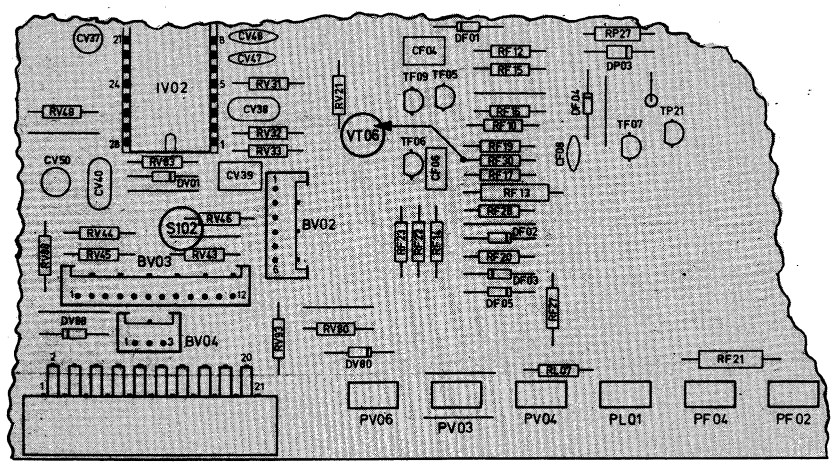
1. De diode DV 01 op de teletekst-moduul verwijderen bij toestellen met telecontrol 2239 en Computer-Control 5.
2. De draadbrug S 102 op het grondchassis verwijderen (zie fig. 5 of 5a) bij toestellen met telecontrol 2239, 2436, Computer-Control 5 en 6.
3. De 1-polige leiding op de aansluitstift VT 06 van de teletekst-moduul steken.
4. De teletekst-moduul op de stekkerlijst BV 03 van het grondchassis steken.
5. De andere stekker van de 1-polige leiding op aansluitstift PI 17 van het grondchassis steken. Bij chassis F 10 en F 11 index A – E is PI 17 niet aanwezig. Bij deze chassis-uitvoering moet de stekker afgeknipt worden en de draad worden vast gesoldeerd aan knooppunt RF 30/RF 23 (zie fig. 5)
6. De moduulhouder op de teletekst-moduul plaatsen en vastschroeven aan de kanalenkiezer-eenheid met de bijgeleverde schroeven.
7. De papierstrook met de instelpunten bij de opdruk „H-Pos." doordrukken, zodat de uitsparing in de chassisrand vrij is. Het bijgevoegde isolatieplaatje in de uitsparing zetten en de koelplaat van de transistor TV 65 met de bijgevoegde schroef aan het isolatieplaatje bevestigen (zie fig. 1). Er moet voor gezorgd worden dat de koelplaat geen elektrisch kontakt maakt met de chassisrand.
8. De 3-polige leiding in stekker-aansluiting (C) van de teletekstmoduul en stekkerlijst BV 05 van het grondchassis steken. Er moet hierbij op gelet worden dat om instraling van de lijntrafo te vermijden de kabel zover mogelijk van de lijntrafo verwijderd wordt (zie fig. 6 of 6a).
9. De 6-polige leiding in stekkerlijst (D) van de teletekst-moduul steken en er voor zorgen dat de neuzen van de 6-polige aansluitstekker bij telecontrol 2102 naar links en bij telecontrol 2239, 2436, Computer-Control 5 en 6 naar rechts wijzen. Het andere einde van de leiding in de passende stekkerlijst van de telecontrol-module stekken. Bij telecontrol 2239, 2436, Computer-Control 5 en 6: VT 02 en bij telecontrol 2102: ST 12.

Monteringsanvisning

Text-TV-kretsplattan är avsedd för montering i NORDMENDE-färg-TV med chassi F 10, F 11 och F 11 B i samband med fjärrkontrollen telecontrol 2102, 2239, 2436, Computer-Control 5 eller 6.

1. Ta bort dioden DV 01 på text-TV-kretsplattan vid apparater med fjärrkontrollen telecontrol 2239 och Computer-Control 5.
2. Ta bort bryggkopplingen S 102 på grundplattan vid apparater med fjärrkontrollen telecontrol 2239, 2436, Computer-Control 5 och 6 (se bild 5 resp. 5a).
3. Sätt den enpoliga ledaren på kontaktstiftet VT 06 på kretsplattan för text-TV.
4. Placera text-TV-kretsplattan på kopplingslisten BV 03 på grundplattan.
5. Sätt de enpoliga ledarens andra stickkontakt på ansluitningsstiftet PI 17 på grundplattan. Vid kretsplattor F 10 och F 11 med index A – E finns inte anslutningsstiftet PI 17. Kapa i dessa fall av ansluitningsledarens stickkontakt och löd fast ledaren till RF 30/RF 23 (bild 5).
6. Placera modulhållaren på text-TV-kretsplattan och sätt fast den på tunerhöljet med den bifogade skruven (A).
7. Håla pappersremsan med inställningspunkterna vid den tryckta texten "H-Pos." så att hålet för chassiskenan öppnas. Placera den bifogade isolerbrickan i hålet (se bild 1).

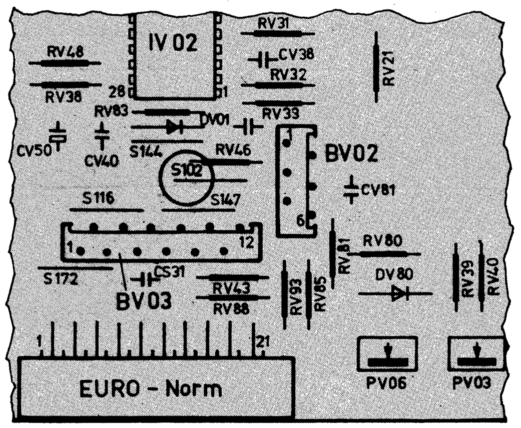
   Fäst transistorns TV 65 kylbleck med den bifogade skruven vid isolerbrickan. Se till att kylblecket inte har elektrisk kontakt med chassiskenan.
8. Anslut den trepoliga ledaren till kopplingslisten (C) på text-TV-kretsplattan, anslut kopplingslisten BV 05 till grundplattan. Observera att ledaren skall placeras så långt bort som möjligt från linjetransformatorn för att undvika strålningspåverkan (se bild 6 resp. 6a).
9. Anslut den sexpoliga ledaren till kopplingslisten (D) på text-TV-kretsplattan ä. Observera att kontakthöljet absolut måste vara rätt placerat. Kontakthöljets båda klackar skall peka åt vänster vid telecontrol 2102 och åt höger vid telecontrol 2239, 2436, Computer-Control 6 och 6. Anslut ledarens andra ände till en passende kopplingslist på systemplattan (systemplatta 2239, 2436, Computer-Control 5 och 6: VT 02, systemplatta 2102: ST 12).



Chassisausschnitt
Incastro telaio
Chassis recess
Coupe du chassis
Chassis uitsnede
Del av chassit

F 10/F 11

⑤



Chassisausschnitt
Incastro telaio
Chassis recess
Coupe du chassis
Chassis uitsnede
Del av chassit

F 11 B

(5a)

NORDMENDE

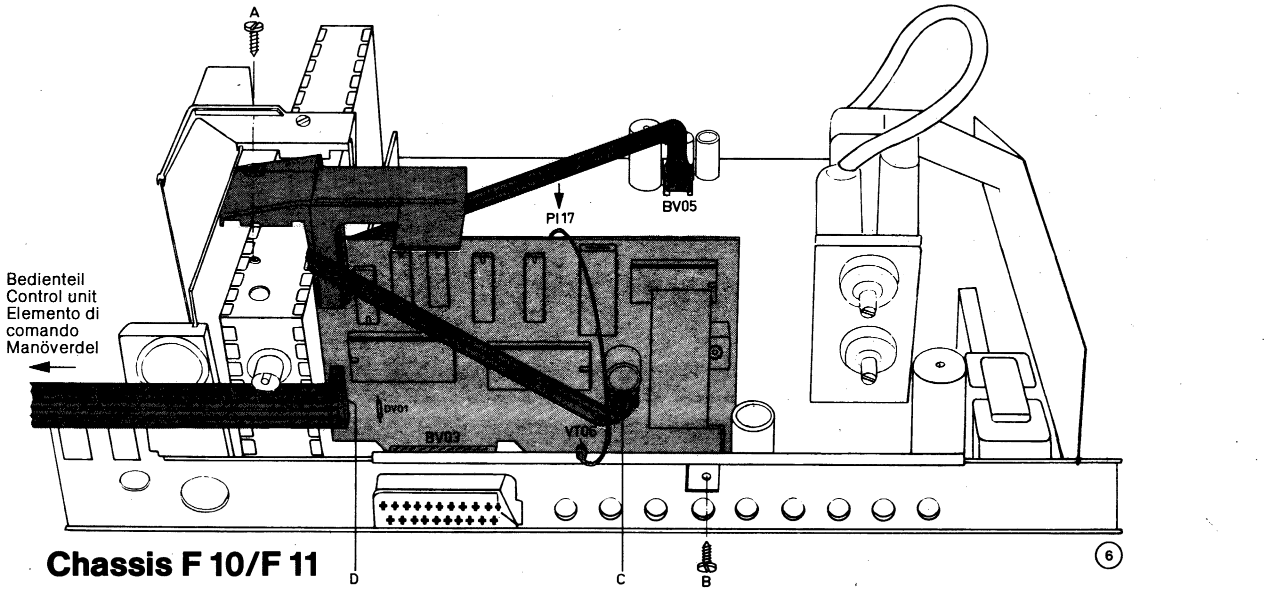
SERVICE-INFORMATION

Videotext-Platine

Piastra televideo
P.C.B. Videotext
Circuit imprimé vidéotexte
Teletekst-moduul
Text-TV-kretsplatta

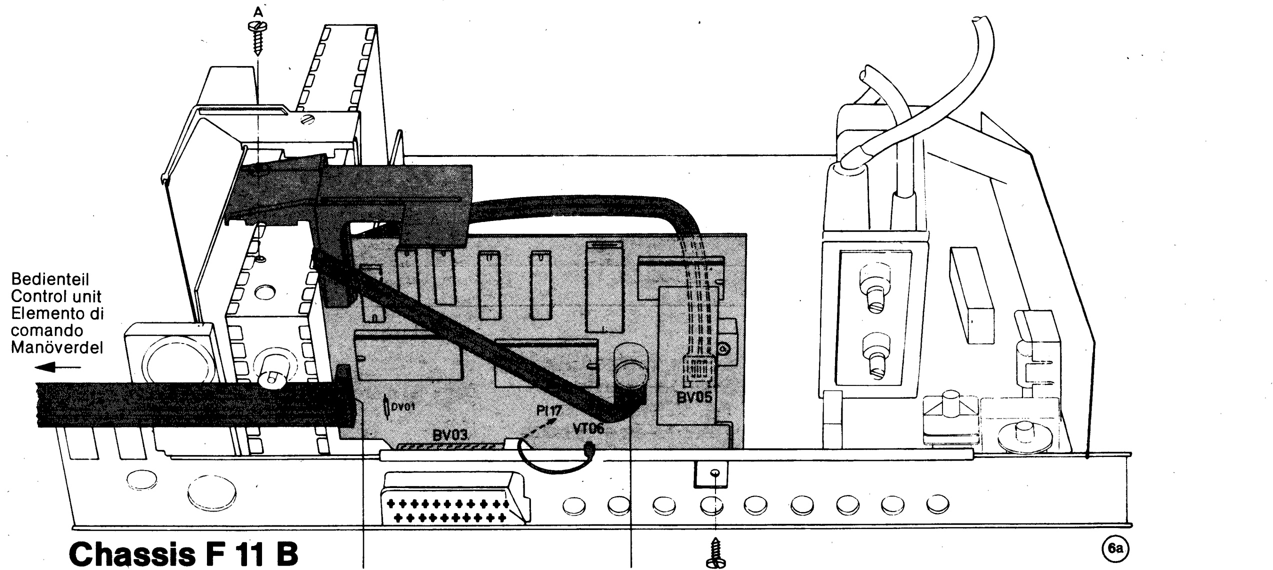
984.582 A Ⓓ
984.582 J Ⓘ
984.588 A Ⓢ

Chassis F 10/F 11/F 11 B – Telecontrol 2102/2239/2436/ Computer-Control 5 / Computer-Control 6



Chassis F 10/F 11

⑥



Chassis F 11 B

(6a)

Diese Angaben und Hinweise sind ausschließlich für den Service des Fachhändlers bestimmt · Änderungen vorbehalten · Questi dati ed istruzioni sono destinati esclusivamente al servizio assistenza clienti · Con riserva di modifiche · These instructions are for service dealers only · Subject to modification · Ces indications et instructions sont destinées exclusivement au service du commerce spécialise · Sous réserve de modifications · Deze gegevens en richtlijnen zijn uitsluitend voor de service van de vakhandelaar bestemd · Veranderingen voorbehouden · Dessa uppgifter och anvisningar är endast avsedda för fackhandelns service · Vi förbehåller oss rätten till ändringar

Einbauanleitung

Die Videotext-Leiterplatte ist für den Einbau in NORDMENDE-Farbfernsehgeräte mit dem Chassis F 10, F 11 und F 11 B in Verbindung mit der Fernbedienung telecontrol 2102, 2239, 2436, Computer-Control 5 oder 6 geeignet.

1. Die Diode DV 01 auf der Videotext-Leiterplatte bei Geräten mit dem Bedienteil telecontrol 2239 und Computer-Control 5 entfernen.
2. Die Brücke S 102 auf der Grundplatte bei Geräten mit dem Bedienteil telecontrol 2239, 2436, Computer-Control 5 und 6 entfernen (siehe Abb. 5 bzw. 5a).
3. Die einpolige Leitung auf dem Anschlußstift VT 06 der Videotext-Leiterplatte stecken.
4. Die Videotext-Leiterplatte auf die Stiftleiste BV 03 der Grundplatte stecken.
5. Den anderen Stecker der einpoligen Leitung auf den Anschlußstift Pl 17 der Grundplatte stecken. Bei den Grundplatten F 10 und F 11 mit Leiterplattenindex A – E ist der Anschlußstift Pl 17 nicht vorhanden. Hierbei den Stecker der Anschlußleitung abschneiden und die Leitung an RF 30/RF 23 anlöten (Abb. 5).
6. Den Modulhalter auf die Videotext-Leiterplatte setzen und am Tunergehäuse mit der beiliegenden Schraube (A) befestigen.
7. Den Papierstreifen mit den Einstellpunkten bei dem Aufdruck „H-Pos.“ durchlochen, so daß die Aussparung der Chassisschiene frei wird. Das beiliegende Isolierstück in die Aussparung einsetzen (siehe Abb. 1). Das Kühlblech des Transistors TV 65 mit der beiliegenden Schraube am Isolierstück befestigen. Es ist darauf zu achten, daß das Kühlblech keinen elektrischen Kontakt mit der Chassisschiene bekommt.
8. Die dreipolige Leitung in die Stiftleiste (C) der Videotext-Leiterplatte und in die Stiftleiste BV 05 der Grundplatte stecken. Es ist darauf zu achten, daß die Leitung, um Einstrahlungen zu vermeiden, möglichst weit vom Zeilentrafo verlegt wird (siehe Abb. 6 bzw. 6a).
9. Die sechspolige Leitung in die Stiftleiste (D) auf der Videotext-Leiterplatte stecken. Hierbei unbedingt auf den richtigen Sitz des Buchsengehäuses achten. Die beiden Nasen des Buchsengehäuses müssen bei Geräten mit telecontrol 2102 nach links zeigen und bei Geräten mit telecontrol 2239, 2436, Computer-Control 5 und 6 nach rechts. Das andere Ende der Leitung in die passende Stiftleiste der Systemplatte stecken (Systemplatte 2239, 2436, Computer-Control 5 und 6: VT 02, Sytemplatte 2102: ST 12).

Istruzioni di montaggio

La piastra P.C.I. televideo è prevista per il montaggio nei televisori a colori NORDMENDE con il telaio F 10, F 11 e F 11 B in collegamento con il comando a distanza telecontrol 2102, 2239, 2436, Computer-Control 5 o 6.

1. Con apparecchi muniti di unità di comando telecontrol 2239 o Computer-Control 5, bisogna rimuovere il diodo DV 01 dalla P.C.I. televideo.
2. Con apparecchi muniti di unità di comando telecontrol 2239, 2436, Computer-Control 5 o 6, bisogna rimuovere il ponte S 102 trovandosi sulla piastra di base (vedi fig. 5 o 5a).
3. Inserire la linea unipolare sul piedino di contatto VT 06 della piastra P.C.I. televideo.
4. Inserire la piastra P.C.I. televideo sulla lista a spine BV 03 della piastra di base.
5. Inserire l'altra spina della linea unipolare sul piedino di contatto Pl 17 della piastra di base. Le piastre F 10 e F 11 con l'indice A – E non sono munite del piedino di contatto Pl 17. In questo caso cortare la spina dalla linea di contatto e saldare la linea su RF 30/RF 23 (fig. 5).
6. Sistemare il supporto del modello sulla piastra P.C.I. televideo e fissarlo sull'alloggiamento del tuner mediante la vite (A) in dotazione.
7. Perforare il nastro di carta con i punti di riferimento presso la scritta "H-Pos." in modo che l'incastro della guida del telaio sia libero. Inserire l'elemento isolante in dotazione nell'incastro (vedi fig. 1). Fissare la lamiera di raffreddamento del transistor TV 65 sull'elemento isolante mediante la vite in dotazione. Attenzione! Evitare un contatto elettrico tra la lamiera di raffreddamento e la guida del telaio.
8. Inserire la linea tripolare sulla lista a piedini di contatto (C) della P.C.I. televideo e sulla lista a piedini di contatto BV 05 della piastra di base. Stare attenti che la linea, per evitare una radiazione penetrante, sia posata il più lontano possibile dal trasformatore di riga (vedi fig. 6 o 6a).
9. Inserire la linea a 6 poli nella lista a spine (D) sulla piastra P.C.I. televideo. Conciò verificare che la sistemazione dell'alloggiamento delle prese sia corretta. Con apparecchi muniti di unità di comando telecontrol 2102, le due bride dell'alloggiamento per le prese devono venir orientate verso la sinistra, con apparecchi muniti di unità di comando telecontrol 2239, 2436, Computer-Control 5 o 6, queste bride sono da orientare verso la destra. Inserire l'altra estremità della linea nella lista a spina appropriata della piastra di sistema (P.C.I. sistema 2239, 2436, Computer-Control 5 e 6: VT 02, P.C.I. sistema 2102: ST 12).

Fitting instructions

This videotext p.c.b. is for fitting to NORDMENDE colour television receivers equipped with chassis F 10, F 11 and F 11 B in conjunction with remote telecontrol 2102, 2239, 2436, Computer-Control 5 or 6.

1. In sets fitted with the control element telecontrol 2239 or Computer-Control 5, the diode DV 01 is to be removed from the videotext p.c.b.
2. In sets fitted with the control element telecontrol 2239, 2436, Computer-Control 5 or 6, the bridge S 102 is to be removed from the basic board (see fig. 5 or 5a).
3. Plug the 1-pole lead on the connection pin VT 06 of the videotext p.c.b.
4. Plug the videotext p.c.b. on to the pin strip BV 03 of the basic chassis.
5. Plug the other end of the 1-pole lead on to connection pin Pl 17 of the basic chassis. With p.c.b. F 10 and F 11 index A – E the pin Pl 17 is not fitted. In this case cut off the lead plug and solder the lead to RF 30/RF 23 (fig. 5).
6. Place the module holder on to the videotext p.c.b. and secure it to the tuner housing with the provided screw (A).
7. Perforate the paper strip with the setpoints next to "H-Pos." print so that the recess of the chassis rail is free. Insert the insulating element provided into the recess (see fig. 1). Secure the heat sink of transistor TV 65 to the insulating element by means of the screw provided. Make sur that electrical contact between heat sink and chassis rail is avoid.
8. Plug the 3-pole lead onto pin strip (C) of the videotext p.c.b. and onto pin strip BV 05 of the basic board. Make sure that the lead, in order to avoid radiation effects, is placed as far as possible from the line output transformer (see fig. 6 or 6a).
9. Plug the 6-pole lead on to the pin strip (D) of the videotext p.c.b. Ensure that the socket housing sits correctly. In sets fitted with telecontrol 2102 the two noses of the socket housing must point to the left, in sets fitted with telecontrol 2239, 2436, Computer-Control 5 or 6, these noses must point to the right. Plug the other end of the lead into the matching pin strip of the system board (system board 2239, 2436, Computer-Control 5 and 6: VT 02, system board 2102: ST 12.

Instructions de montage

Le circuit imprimé vidéotexte est prévu pour être monté dans les téléviseurs couleurs NORDMENDE dotés de chassis F 10, F 11 et F 11 B, en liaison avec la télécommande telecontrol 2102, 2239, 2436, Computer-Control 5 ou 6.

1. Pour les téléviseurs munis de l'unite de commande télécontrol 2239 et Computer-Control 5, ôtez la diode DV 01 du circuit imprimé vidéotexte.
2. Pour les téléviseurs munis de l'unité de commande télécontrol 2239, 2436, Computer-Control 5 et 6, ôtez le pont S 102 se trouvant sur la plaque d'assise (voir fig. 5 ou 6).
3. Engagez le câble à 1 pole dans la fiche de branchement VT 06 du circuit imprimé vidéotexte.
4. Engagez le circuit imprimé vidéotexte sur la réglette à goupilles BV 03 de la plaque d'assise.
5. La deuxième extrémité du câble à 1 pôle est à enganger das la fiche de branchement Pl 17 de la plaque d'assise. La fiche Pl 17 n'existe pas pour les circuits imprimés F 10 et F 11 index A – E. Dans ce cas, coupez la fiche du câble de branchement et soudez ce câble au RF 30/RF 23 (fig. 5).
6. Placez le support du module sur le circuit imprimé vidéotexte et fixez-le au boîtier à l'aide de la vis (A) que vous trouverez jointe.
7. Percez la bande de papier comportant les mots imprimés „H-Pos." à l'aide des points d'alignement de telle sorte que l'évidement de la tige du chassis se trouve libre. Placez dans cet évidement la pièce isolante (voir fig. 1). Fixez la tôle de refroidissement du transistor TV 65 à la pièce isolante à l'aide de la vis jointe. Veillez particulièrement à ce que la tôle de refroidissement n'ait pas de contact électrique avec la tige du chassis.
8. Engagez le câble à 3 pôles dans la réglette à goupilles (C) du circuit imprimé vidéotexte et dans la réglette à goupilles BV 05 de la plaque d'assise. Veuillez faire particulièrement attention pour que le câble soit placé le plus loin possible du transformateur de lignes afin d'éviter la propagation de rayons (voir fig. 6 ou 6a).
9. Engagez le câble à 6 pôles dans la réglette à goupilles (D) du circuit imprimé vidéotexte. Veillez à la bonne position du boîtier à douilles. Les deux nez du boîtier à douilles doivent pointer vers la gauche pour les téléviseurs munis de telecontrol 2102 et vers la droite pour les téléviseurs munis des télécontrol 2239, 2436, Computer-Control 5 et 6. Engagez l'autre extrémité du câble dans la réglette à goupilles de la plaque systeme correspondante (plaque de système 2239, 2436, Computer-Control 5 et 6: VT 02, plaque de système 2102: ST 12).

Inbouwgegevens

De teletekst-moduul is voor inbouw in een NORDMENDE ktv met chassis F 10, F 11, F 11 B en voorzien van afstandbediening telecontrol 2102, 2239, 2436, Computer-Control 5 of 6.

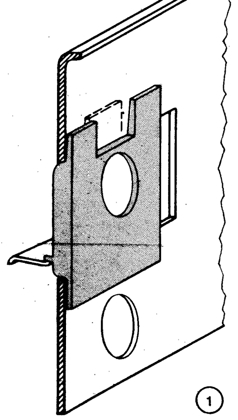
1. De diode DV 01 op de teletekst-moduul verwijderen bij toestellen met telecontrol 2239 en Computer-Control 5.
2. De draadbrug S 102 op het grondchassis verwijderen (zie fig. 5 of 5a) bij toestellen met telecontrol 2239, 2436, Computer-Control 5 en 6.
3. De 1-polige leiding op de aansluitstift VT 06 van de teletekst-moduul steken.
4. De teletekst-moduul op de stekkerlijst BV 03 van het grondchassis steken.
5. De andere stekker van de 1-polige leiding op aansluitstift Pl 17 van het grondchassis steken. Bij chassis F 10 en F 11 index A – E is Pl 17 niet aanwezig. Bij deze chassis-uitvoering moet de stekker afgeknipt worden en de draad worden vast gesoldeerd aan knooppunt RF 30/RF 23 (zie fig. 5)
6. De moduulhouder op de teletekst-moduul plaatsen en vastschroeven aan de kanalenkiezer-eenheid met de bijgeleverde schroeven.
7. De papierstrook met de instelpunten bij de opdruk „H-Pos.“ doordrukken, zodat de uitsparing in de chassisrand vrij is. Het bijgevoegde isolatieplaatje in de uitsparing zetten en de koelplaat van de transistor TV 65 met de bijgevoegde schroef aan het isolatieplaatje bevestigen (zie fig. 1). Er moet voor gezorgd worden dat de koelplaat geen elektrisch kontakt maakt met de chassisrand.
8. De 3-polige leiding in stekker-aansluiting (C) van de teletekstmoduul en stekkerlijst BV 05 van het grondchassis steken. Er moet hierbij op gelet worden dat om instraling van de lijntrafo te vermijden de kabel zover mogelijk van de lijntrafo verwijderd wordt (zie fig. 6 of 6a).
9. De 6-polige leiding in stekkerlijst (D) van de teletekst-moduul steken en er voor zorgen dat de neuzen van de 6-polige aansluitstekker bij telecontrol 2102 naar links en bij telecontrol 2239, 2436, Computer-Control 5 en 6 naar rechts wijzen. Het andere einde van de leiding in de passende stekkerlijst van de telecontrol-module stekken. Bij telecontrol 2239, 2436, Computer-Control 5 en 6: VT 02 en bij telecontrol 2102: ST 12.

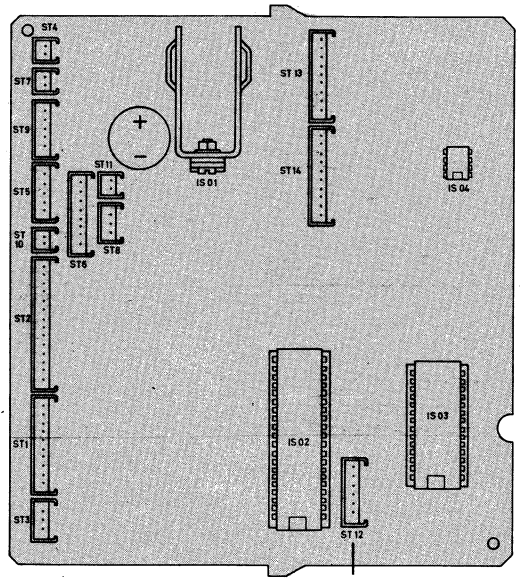
Monteringsanvisning

Text-TV-kretsplattan är avsedd för montering i NORDMENDE-färg-TV med chassi F 10, F 11 och F 11 B i samband med fjärrkontrollen telecontrol 2102, 2239, 2436, Computer-Control 5 eller 6.

1. Ta bort dioden DV 01 på text-TV-kretsplattan vid apparater med fjärrkontrollen telecontrol 2239 och Computer-Control 5.
2. Ta bort bryggkopplingen S 102 på grundplattan vid apparater med fjärrkontrollen telecontrol 2239, 2436, Computer-Control 5 och 6 (se bild 5 resp. 5a).
3. Sätt den enpoliga ledaren på kontaktstiftet VT 06 på kretsplattan för text-TV.
4. Placera text-TV-kretsplattan på kopplingslisten BV 03 på grundplattan.
5. Sätt de enpoliga ledarens andra stickkontakt på ansluitningsstiftet Pl 17 på grundplattan. Vid kretsplattor F 10 och F 11 med index A – E finns inte anslutningsstiftet Pl 17. Kapa i dessa fall av ansluitningsledarens stickkontakt och löd fast ledaren till RF 30/RF 23 (bild 5).
6. Placera modulhållaren på text-TV-kretsplattan och sätt fast den på tunerhöljet med den bifogade skruven (A).
7. Håla pappersremsan med inställningspunkterna vid den tryckta texten "H-Pos." så att hålet för chassiskenan öppnas. Placera den bifogade isolerbrickan i hålet (se bild 1).

   Fäst transistorns TV 65 kylbleck med den bifogade skruven vid isolerbrickan. Se till att kylblecket inte har elektrisk kontakt med chassiskenan.
8. Anslut den trepoliga ledaren till kopplingslisten (C) på text-TV-kretsplattan, anslut kopplingslisten BV 05 till grundplattan. Observera att ledaren skall placeras så långt bort som möjligt från linjetransformatorn för att undvika strålningspåverkan (se bild 6 resp. 6a).
9. Anslut den sexpoliga ledaren till kopplingslisten (D) på text-TV-kretsplattan ä. Observera att kontakthöljet absolut måste vara rätt placerat. Kontakthöljets båda klackar skall peka åt vänster vid telecontrol 2102 och åt höger vid telecontrol 2239, 2436, Computer-Control 6 och 6. Anslut ledarens andra ände till en passende kopplingslist på systemplattan (systemplatta 2239, 2436, Computer-Control 5 och 6: VT 02, systemplatta 2102: ST 12).

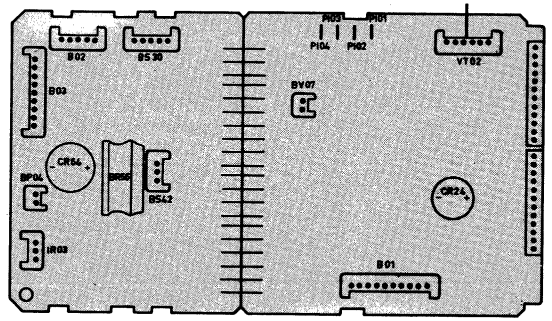

①



telecontrol 2102 **(ST 12)** ②

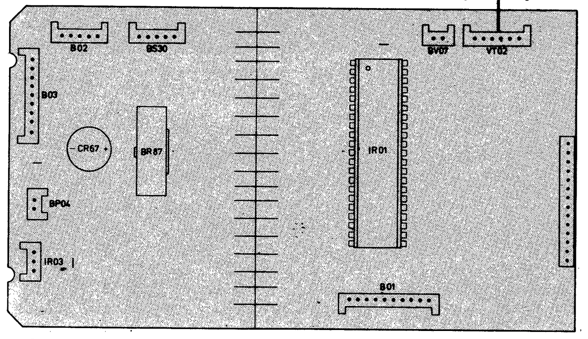
Systemplatte
P.C.I. sistema
System P.C.B.
Plaque de système
Telecontrolmoduul
Systemplatta

(VT 02)

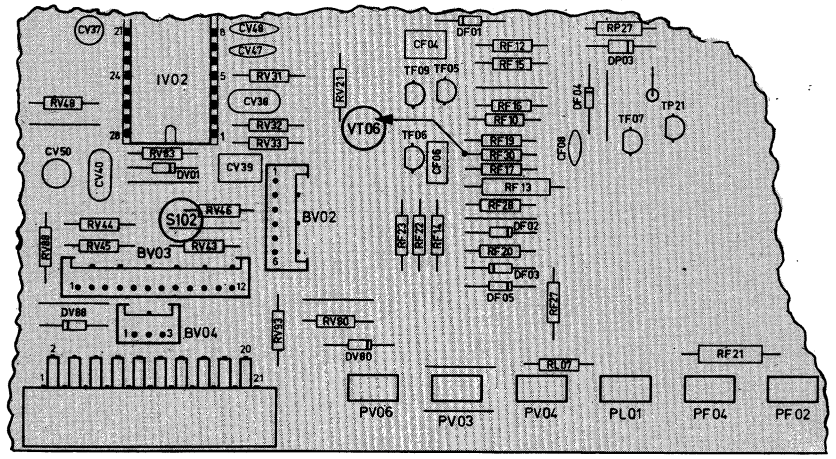


telecontrol 2436/Computer-Control 6 ③

(VT 02)

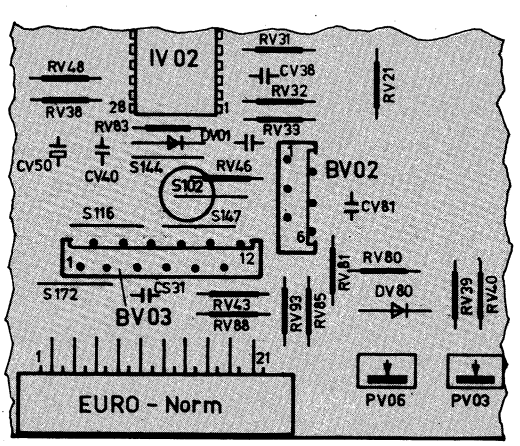


telecontrol 2239/Computer-Control 5 ④



Chassisausschnitt
Incastro telaio
Chassis recess
Coupe du chassis **F 10/F 11**
Chassis uitsnede
Del av chassit

⑤



Chassisausschnitt
Incastro telaio
Chassis recess
Coupe du chassis **F 11 B**
Chassis uitsnede
Del av chassit

⑤a

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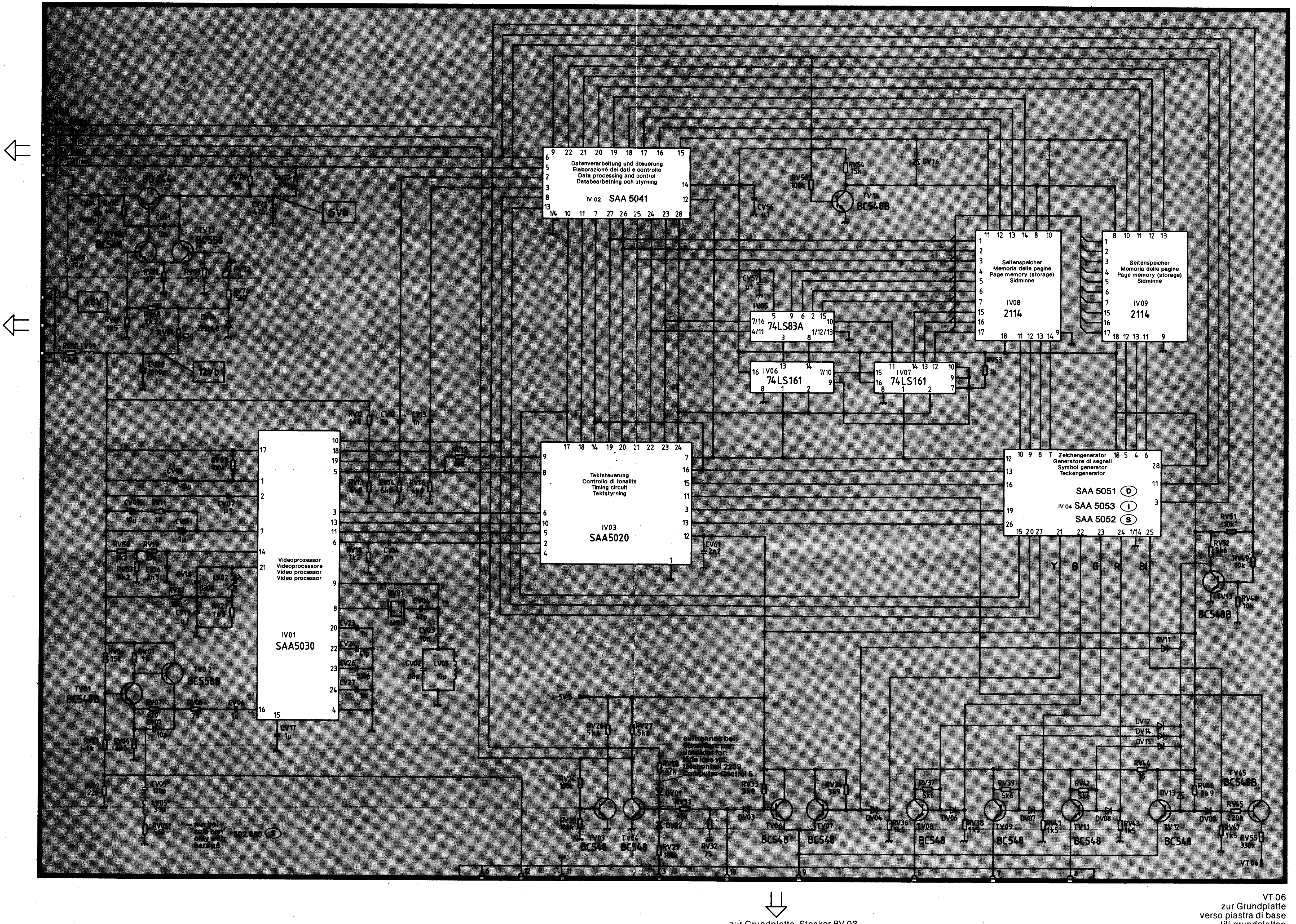
Leiterplatte Videotext 592.849 Ⓓ
Piastra Televideo 592.874 Ⓘ
P.C.B. Videotext
Text-TV-kretsplatta 592.850 Ⓢ

Bedienteil
Elemento di comando
Control unit
Manöverdel

zur Grundplatte
verso piastra di base
till grundplattan
Stecker/spina/plug/Kontakt BV 05


Datenverarbeitung und Steuerung
Elaborazione dei dati e controllo
Data processing and control
Databearbetning och styrning
IV 02 SAA 5041
Seitenspeicher
Memoria delle pagine
Page memory (storage)
Sidminne
IV08 2114
IV09 2114
IV05 74LS83A
IV06 74LS161
IV07 74LS161
Taktsteuerung
Controllo di tonalità
Timing circuit
Taktstyrning
IV03 SAA5020
Zeichengenerator
Generatore di segnali
Symbol generator
Teckengenerator
SAA 5051 Ⓓ
IV 04 SAA 5053 Ⓘ
SAA 5052 Ⓢ
Y B G R Bl
Videoprozessor
Videoprocessore
Video processor
Video processor
IV01 SAA5030
BD 244
BC548
BC558
BC548B
BC558B
5Vb
6,8V
12Vb
5V b
DV16
DV11
DV12
DV14
DV15
DV13
TV14 BC548B
TV13 BC548B
TV45 BC548B
auftrennen bei:
dissaldare per:
unsolder for:
löda loss vid:
telecontrol 2239,
Computer-Control 5
* nur bei
solo per
only with
bara på
592.850 Ⓢ
VT 06

zur Grundplatte, Stecker BV 03
verso piastra di base, spina BV 03
to basic board, plug BV 03
till grundplattan, Kontakt BV 03

VT 06
zur Grundplatte
verso piastra di base
till grundplattan
Stift/pin/piedino/PI 17/VT 06

Schaltbildhinweise

⚠

Sicherheitszeichen

Diese Bauteile sind bei Reparaturen nur durch die vom Hersteller geprüften und angegebenen Originalteile zu ersetzen, um die vorgesehene Betriebssicherheit zu gewährleisten.

Alle nicht gekennzeichneten Dioden 1 N 4148.

Service-Einstellungen

1. Mit PV 72 4,95 V an Pin 12/IV 03 einstellen.
2. Mit LV 02 gegebenenfalls Fehler beim Neueinschreiben einer Textseite minimieren. Dazu das Antennensignal abschwächen, bis Fehler auftreten und möglichst eine Testseite anwählen, die ständig neu eingeschrieben wird (Seite 199).

Indicazione sullo schema

⚠

Contrassegno di sicurezza

Nel caso di riparazione questi elementi devono venire sostituiti soltanto per delle parti di ricambio originali controllati e designati da parte del fabbricante per garantire la sicurezza di funzionamento prevista.

Tutti i diodi non contressegnati 1 N 4148.

Regolazione di servizio

1. Regolare PV 72 in modo che il voltaggio al pin 12/IV 03 sia di 4,95 V.
2. Ridurre al minimo con LV 02 errori nella nuova trascrizione di testi di pagine nuove. Attenuare a ciò il segnale antenna, finché appaiano errori e possibilmente selezionare una pagina che venga continuamente riscritta con testi nuovi.

Circuit notes

⚠

Components designated by the safety symbol should, when necessary for repair, only be replaced by original parts produced and proofed by the manufacturer. Only then can the original operational safety be guaranteed.

Diodes not designated all 1 N 4148.

Service adjustments

1. Adjust pin 12/IV 03 for 4.95 V with the aid of PV 72.
2. Use LV 02, if necessary, to minimize the error when a new page of text is displayed on the screen. To do so, attenuate the antenna signal until errors appear and, where possible, select as a test page one in which new text is read in continuously.

Anmärkningar till kretsschemat

⚠

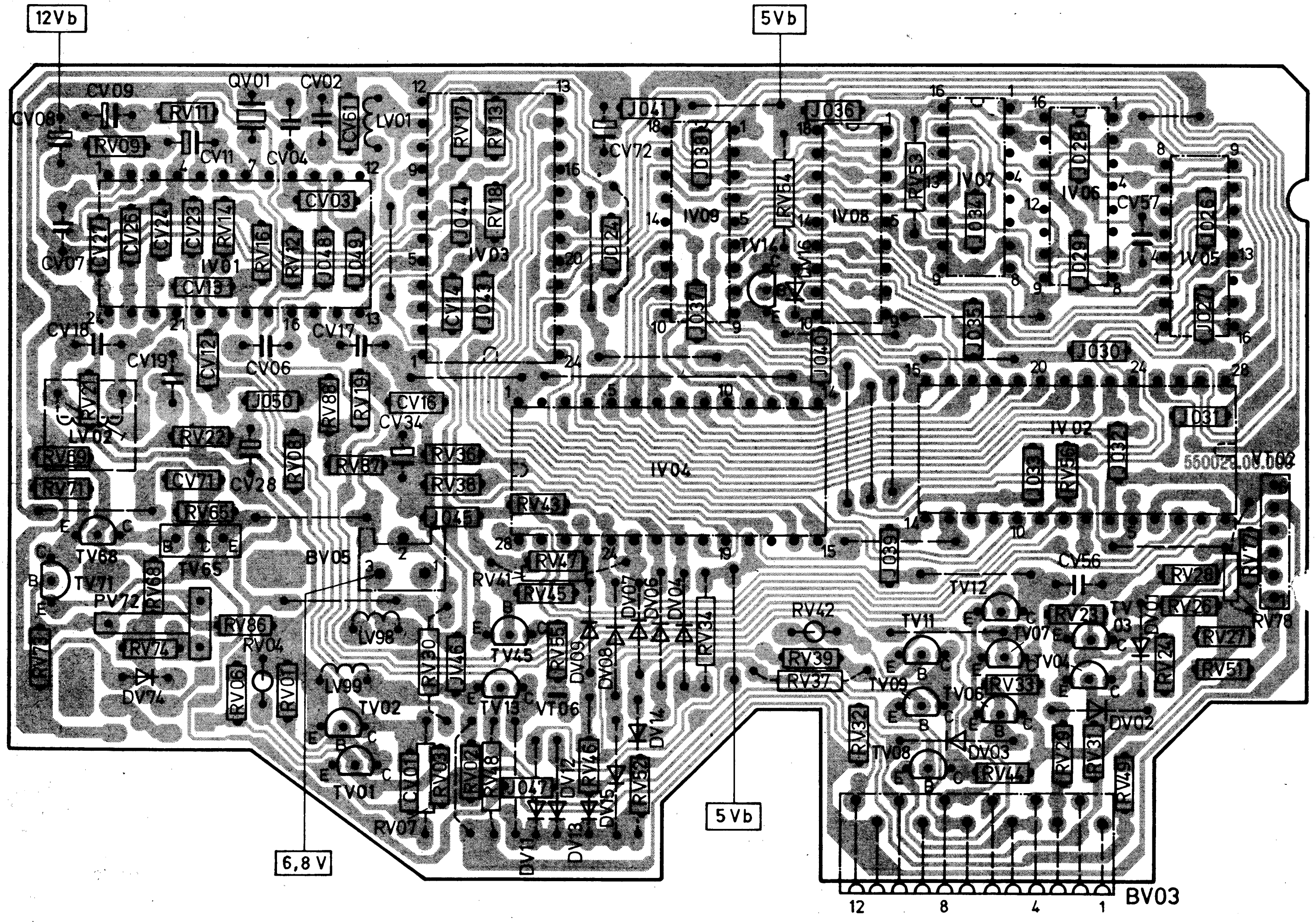
Säkerhetsmärke

Dessa komponenter får vid reparation endast bytas ut mot originaldelar som kontrollerats och föreskrivits av tillverkaren, för att garantera driftsäkerheten.

Alla omärkta dioder 1 N 4148.

Serviceinställningar

1. Med PV 72 injusteras 4,95 V på pin 12/IV 03.
2. Med LV 02 reduceras vid behov fel vid nyutskrift av en textsida till ett minimum. Gör antennsignalen svagare tills felet syns och välj om möjligt en testsida som hela tiden skrivs in på nytt.


12Vb
5Vb
6,8 V
BV03
BV05
IV01
IV02
IV03
IV04
IV05
IV06
IV07
IV08
IV09
TV01
TV02
TV45
TV65
TV68
TV71
PV72
LV02
LV01
QV01
12
8
4
1
550028.06.002

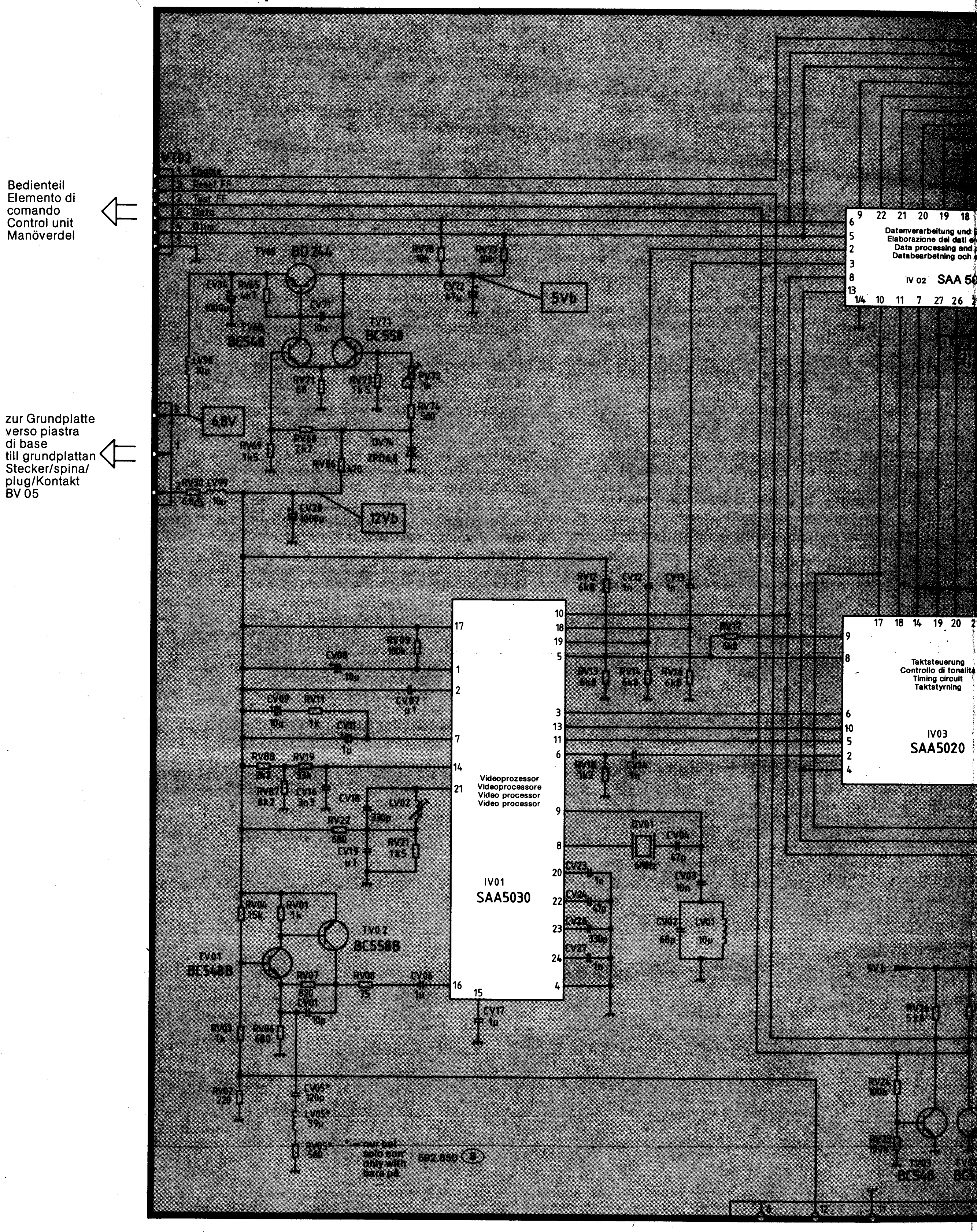
Leiterplatte Videotext
Piastra Televideo
P.C.B. Videotext **592.849/850/874**
Text-TV-kretsplatta
Lötseite – Lato saldature – Soldered side – Lödsida

NORDMENDE

Videotext-Platine
Piastra Televideo
P.C.B. Videotext
Text-TV-kretsplatta

984.582 A (D)
984.582 J (I)
984.588 A (S)

Leiterplatte Videotext **592.849 (D)**
Piastra Televideo **592.874 (I)**
P.C.B. Videotext **592.850 (S)**
Text-TV-kretsplatta


Bedienteil
Elemento di comando
Control unit
Manöverdel
zur Grundplatte
verso piastra di base
till grundplattan
Stecker/spina/plug/Kontakt
BV 05
VT02
BD 244
BC548
BC558
5Vb
6,8V
12Vb
ZPD6,8
IV01
SAA5030
Videoprozessor
Videoprocessore
Video processor
Video processor
TV01
BC548B
TV02
BC558B
IV02
SAA50
Datenverarbeitung und
Elaborazione dei dati
Data processing and
Databearbetning och
IV03
SAA5020
Taktsteuerung
Controllo di tonalità
Timing circuit
Taktstyrning
nur bei
solo con
only with
bara på
592.850 (S)